

610.5

X17
110



Library
of the
Academy of Medicine,
Toronto.

11758

Presented by

Publishers

1921




NASHVILLE JOURNAL

MEDICINE and SURGERY

C. S. BRIDGES, M.D., M.P.
Editor and Publisher

Volume 110—January-December, 1918

NASHVILLE, TENNESSEE



Digitized by the Internet Archive
in 2008 with funding from
Microsoft Corporation

NASHVILLE JOURNAL

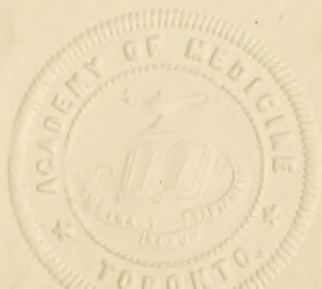
—OF—

MEDICINE and SURGERY

C. S. BRIGGS, A.M., M.D.
EDITOR and PROPRIETOR

Volume 110—January-December, 1916

NASHVILLE, TENNESSEE
1916



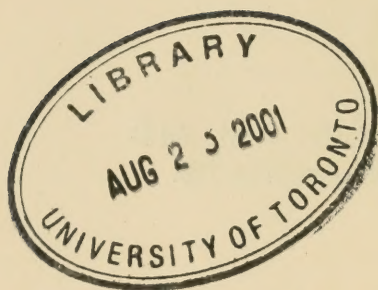


TABLE OF CONTENTS—VOLUME CX

Acute Appendicitis with Peritonitis, their Relations and Treatment..	434
Administration of Diphtheria Antitoxin—Safety First.....	456
A Simple Device for Locating Foreign Bodies in Fingers.....	462
American Proctological Society.....	398
Abdominal Pregnancy, Probably Primary.....	419
Acute Appendicitis	122
A Sign of Fracture of the Pelvis.....	167
A Simple Method of Removing Flat Foreign Bodies from the Trachea of Young Children.....	216
Annual Report of Surgical Operations at Briggs' Private Surgical Infirmiry	289, 338
Anthrax due to Shaving Brush.....	366
A New Paste for Skin Affections.....	366
Ammonia as an Enema.....	367
A Domestic Remedy for Whooping Cough.....	511
Acute Renal Infection in Pregnancy and the Puerperium.....	555
 Bacterial Contamination	554
Backward Displacement of the Uterus After the Menopause.....	554
Bloodless Operation for Hemorrhoids.....	318
Bilateral Tubal Pregnancy.....	368
Bacterin Treatment of Eclampsia.....	468
Bacillaemia in Tb. Shown by Post-mortem Clots from Heart.....	550
 Certain Facts of Interest About the Cardiovascular System.....	14
Chloretone in Burns.....	27
Cesarean Section of the Cervix.....	30
Carcinoma of the Male Breast.....	66
Cure of a Vulval Cancer by Zeller's Method.....	77
Cases of Renal Tuberculosis Illustrating Modern Methods of Diagnosis	97
Chenopodium in the Treatment of Uncinariasis.....	218
Copper Sulphate Treatment of Trachoma.....	218
Cesarean Section	222

Cold Abscess of Tongue.....	317
Cholecystitis	317
Cholecystostomy vs. Cholecystectomy.....	365
Cholecystectomy	462
Colloidal Silver and Puerperal Sepsis.....	468
Death from Hemorrhage Following Peritonsillar Abscess.....	26
Direct Injections into the Heart in Desperate Conditions.....	74
Dysmenorrhea	80
Diagnosis of Extent of Injury in Abdominal Wounds.....	124
Diphtheria Carriers	125
Diuresis and Milk Flow.....	130
Diet After Abdominal Operations.....	168
Dermatologic Reminders	172
Distinction Between Boils and Abscesses.....	414
Death Following the Sting of a Wasp.....	416
Death of a Sword Swallower.....	549
Editorial.....	33, 81, 133, 179, 223, 274, 327, 370, 422, 470, 513, 550
Enteroptosis	56
Effect of Phloridzin on Tumors.....	123
Emetine in Mucous Colitis.....	170
Eradicating Malaria by Way of the Human Host.....	171
Eclampsia	177
Extracts from an Address Delivered April 12, 1916, Before the Zoölog- ical Department of the University of Chicago.....	258
Early Ether Analgesia	415
Erysipelas Treated by Diphtheria Serum.....	416
Epidemics of Pemphigus Neonatorum in Chicago.....	551
Fracture of the Hip.....	161
Flapless Amputation	319
Fissure at the Anus.....	502
Heart Inhibition During Vomiting.....	127
Home Treatment of Sciatica.....	128
Hexal as a Urinary Antiseptic.....	173

INDEX.

v

Hernias of the Urinary Bladder.....	241
Hydrops Tubae Profluens.....	273
Intracranial Hemorrhage in the Newly Born.....	78
Indications for Operation in Exophthalmic Goitre.....	121
Indications and Contraindications for Abdominal Section.....	131
Injuries from Hot Water Bottle.....	126
Intestinal Stasis	169
Influenza	200
Intravenous Injections of Chloral in the Treatment of Tetanus.....	217
Is Syphilis Hereditary.....	326
Left Fallopian Tube Found in Left Femoral Hernia.....	557
Myomectomy Followed by Sepsis.....	75
Magnesium Sulphate in Non-Amœbic Dysentery.....	219
Mobilization of the Lung in Treatment of Pulmonary Tuberculosis in Early Stages	219
Medical Treatment of Diabetics.....	322
Method of Minimizing the Pain of Pregnancy.....	421
Magnesium Sulphate Lotion in Cellulitis.....	463
Medical Treatment of Gastric and Duodenal Ulcers.....	551
Measles, Pertussis and Pneumonia.....	553
Novocain Not Under Harrison Act	467
Nephropexy	320
Nature of the Lower Uterine Segment.....	325
Neurotherapy	272
Neosalvarsan in the Treatment of Tabes.....	29
Occurrence of Acidosis in Children.....	28
On the Use of Scopolamine-Morphine in Labor.....	77
Operation for Aneurysm of Extremity.....	215
Occult Blood in the Stools.....	323
Operative Treatment of Rupture of the Liver.....	364
Obituary	187, 428, 520, 564

Periodic Drinking a Form of Convulsions.....	49
Puerperal Insanity	108
Perforations in Typhoid Fever.....	145
Pituitrin in Uterine Inertia.....	176
Painless Childbirth	220
Prognostic Significance of the Urine in Puerperal Infection.....	369
Psychological Facts in Medical Testimony.....	385
Prophylaxis and Treatment of Arteriosclerosis.....	446
Pregnancy in Fibromatous Uteri.....	512
Pressure Sign of Peritoneal Irritation.....	69
Pituitary Extract in Post-Abortion Curettage.....	556
 Rectal Anesthesia in Thyroidectomy.....	27
Roentgen-Ray Treatment of Exophthalmic Goitre.....	68, 552
Results of Mesothorium Treatment of 100 Cases of Cancer of the Uterus	76
Removal of Ovaries.....	80
Rammstedt's Operation in Hypertrophic Pyloric Stenosis.....	272
Roentgen-Ray Treatment of Exophthalmic Goitre.....	552
Reviews and Book Notices.....	44, 93, 142, 190, 237, 286, 334, 383, 430, 478, 522
 Sugar for Sick Infants.....	170
Some Indications for Venesection.....	174
Successful Post-Mortem Cesarian Section.....	368
Scientific Researches into the Causes of Alcoholism and Inebriety...	444
Surgical Treatment of Acute Epididymitis.....	464
Superfetation	469
Separation of Buttocks.....	510
Strangulation of Diaphragmatic Hernia.....	510
Surgery and the Surgeon.....	541
 The Present Condition of Syphilitic Therapy.....	1
Treatment of Uterine Cancer.....	32
Transplantation of Undescended Testicle.....	66
The Treatment of Arthritis.....	71
Tuberculin Therapy	71

Treatment of Renal Diseases.....	72
The Dog as a Carrier of Disease.....	73
The Prevention of Peritoneal Adhesions.....	67
The Effect of Caffeine upon the Blood-flow in Normal Human Subjects.....	129
Treatment of Ophthalmia Neonatorum.....	132
The Effects of Vasectomy.....	167
The Physician in Industry.....	150
The Cause of Chorea Complicating Pregnancy.....	178
Thread Drainage.....	215
Two Cases of Acute Intestinal Occlusion Following Parturition.....	264
The Care and Comfort of the Surgical Patient.....	303
The Increase of Cancer; Some Therapeutic and Prophylactic Deductions.....	529
The Fate of Patients Who Have Had Stones Removed from the Kidney.....	546
The Use of Heat in the Control of Inoperable Cancer.....	546
The Treatment of Radium of Carcinoma of the Prostate and Bladder.....	547
The Shockless Operation.....	548
The Value to the Surgeon of a Thorough Understanding of Therapeutic Agents.....	548
Toxicity of Salvarsan.....	549
The Use of Salt Solution by the Bowel in Infants and Children.....	553
The Cancer Problem.....	314
The Use of Boiled Milk in Infant Feeding.....	321
The Treatment of Puerperal Sepsis by Uterine Suction and Drainage.....	323
The Causes and Treatment of Sterility in Women.....	351
Treatment of Septic Wounds, with Special Reference to the Use of Salicylic Acid.....	364
The Treatment of Hemorrhoids by Interstitial Injection.....	415
The Treatment of Tonsillitis.....	418
The Suprarenals and the Thyroids.....	464
The Use of Emetine.....	466
The Fallopian Tubes in Puerperal Fever.....	467
The Psychology of Practical Charity.....	481
The Indian is No Longer a Vanishing Race.....	489
Treatment of Carriers of Amebic Dysentery.....	511
Treatment of Cancer of the Uterus.....	512
Tubal Sterilization.....	558

Use of Caffeine in Digitalis Arrhythmias.....	128
Uterine Fibroids	557
Warm Anesthetic Vapors.....	69
X-ray Treatment of Uterine Fibroids.....	175

NASHVILLE JOURNAL — OF — MEDICINE AND SURGERY

CHARLES S. BRIGGS, A.M., M.D., Editor.
W. T. BRIGGS, B.A., M.D., Associate Editor.

VOL. CX.

JANUARY, 1916.

No. 1

Original Communications

THE PRESENT CONDITION OF SYPHILITIC THERAPY.

BY DR. A. ROSTENBERG.

(Translated from *New Yorker Medicinische Monatschrift*
by W. T. Briggs, M.D.)

In the symposium on syphilis at the last meeting of the American Medical Association the assertion was made by those whose opinion is valued, that 99 per cent of all practitioners in this country were unable to treat syphilis according to the present standards. Whether this is an exaggeration or not I will let others decide. If such were really the case it would be a rather sad state of affairs, since every general practitioner sees and handles cases of syphilis, and we must all confess that syphilis is not an insignificant disease. Blaschko says that 33 per cent of all syphilitics die of syphilis and 50 per cent of these have syphilis of some vital organ. Since such is the case it is the duty of every practitioner to know how to diagnose and treat syphilis correctly, because this malady, if treated early is amenable to treatment.

ment, but on the other hand, if unrecognized and untreated, becomes one of the greatest enemies of society.

Has the last word about the treatment of syphilis been written? Apparently no. In spite of all modern investigations there is a difference of opinion among the foremost syphilographers as to the treatment. Wechsellmann in Virchow's hospital in Berlin uses only salvarsan, and as you all know, he treats an immense number of syphilitics. On the other hand, Buschke, in the same hospital, does not use salvarsan at all, but employs mercury to the exclusion of all other drugs.

As in most other controversies of a similar nature the truth seems to lie at neither extreme; most syphilographers today take the stand that the rational treatment depends on a rational combination of both drugs. Both medicaments either destroy the spirochaetes entirely or at least hinder their development, and according to experiments it seems that each attacks the micro-organisms in its own peculiar way and for that reason it seems logical to use both weapons against the enemy at the same time. Furthermore, it seems that the combination of the two drugs is not only more effective than either alone, but that the toxic effect on the patient is less pronounced. Salvarsan sets free a large amount of endotoxin and the action of this endotoxin is considerably weakened if mercury is given before or after the salvarsan. Besides this, the effective dose of each drug is smaller when used in combination than when either is used alone.

Naturally we can expect more success from a therapeutic standpoint when we see the case in the earliest stage of the disease. Neisser and Uhlenbluth have demonstrated by experiments on animals that immediately after infection the poison enters the circulation; if salvarsan is then given intravenously it will reach the enemy in the open and a great triumph will be won, indeed even a complete sterilization of the patient. Unfortunately there are two hindrances to such a complete success; first, we must educate our patients not to hide their venereal diseases from us and go to a friend

or use mercury, and second we must be able to make a correct diagnosis in the early stage. Here we can say "*Hic Rhodus, hic salta.*" To await the secondaries, as in the good old days, would at the present time be considered ignorance and negligence. We must make the diagnosis on the spot and immediately commence treatment. Unfortunately in my opinion the Wassermann reaction, the most valuable of the three modern discoveries regarding syphilis, is completely worthless at this time. We seldom get a positive reaction before the sixth week after the infection. Therefore if we have the slightest doubt whether it is syphilis or not, it is our duty to seek further confirmation, and fortunately we can demonstrate the spirochaete microscopically. But a word of warning in regard to this. The India ink method, which seems to be quite popular on account of its ease of application, is not dependable. The search should always be made with the dark field illumination. With this method we often find the spirochætes in large numbers at the first glance, while with the ink method a long search is often unsuccessful.

If the diagnosis is positive, then one should commence treatment immediately. At this time we have the best chance, as mentioned before, not only to cure the chancre, but the systemic affection as well. The spirochætes are in the primary lesion or perhaps the neighboring lymph glands. One intravenous injection can occasionally destroy them all, or at least hinder their further development and spread. Ehrlich's "*Therapia sterilans magna*" is not so impossible in an early case. Unfortunately the relapses since this famous expression of Ehrlich's have been so numerous, that at present no one, not even Ehrlich¹ himself, allows the treatment to stop after one injection. Several injections should be given, and mercury as well.

Should the chancre be excised? Many authors recommend this operation when it is practicable. I myself do not,

¹Deceased

but impress the necessity of cleanliness and prescribe calomel as a dusting powder. I then commence the treatment with an injection of 0.3 to 0.45 gm. of neosalvarsan, according to the weight and condition of the patient. I might mention the fact here that until a short time ago I have used neosalvarsan exclusively and believed that the effect was just as good, though not so long lasting as that from alt-salvarsan. Since, however, the effect of neosalvarsan is considered inferior to that of alt-salvarsan, by many authorities, I have recently commenced the alt again, but still believe, for the general practitioner, especially if used in ambulatory cases, the neo is to be preferred, since it dissolves easily in water without the addition of other chemicals. Besides, it can be used in concentrated solution in a simpler and more practical method than the infusion, which method is known to you all, and so I will not take the time to describe it.

In the so-called concentrated method we need no complicated apparatus. The neosalvarsan is dissolved in 10 ccm. of freshly distilled and boiled water which has been allowed to cool, is drawn into a Record syringe and slowly injected into a vein, preferably the median basilic at the elbow. As you see, this is a very simple procedure and can be easily carried out in a very few minutes in the office consultation room. I tell my patients to lie down as soon as they reach home. In many cases even this simple prescription has not been heeded—the patients have gone to work, and yet nothing has happened. As you see, I use the direct method, except in cases in which, on account of the fat, or because of slight development of the veins, the introduction of the needle into the lumen of the vein would be difficult without exposing. In order to avoid this objectionable operation, in such cases, I inject the salvarsan intramuscularly, either in a watery solution or an oily suspension, both of which procedures are rather painful compared to the painless intravenous method. After the first injection I give my patients four or five more injections by the method explained above, giving the second injection eight or ten days after the first

and in case the latter was reactionless I give 0.45 to 0.6 gm.; two weeks later 0.6 to 0.75 gm. and increase the last dose to 0.9 of the neo or a corresponding dose of the alt.

Immediately after the first injection of salvarsan I commence the weekly injection of mercury, and for this purpose use the salicylate of mercury in 10 to 20 per cent emulsion, of which I inject ten drops in the gluteal region. This preparation causes almost no pain. Using this method I give ten to fifteen injections. This I consider one course in the treatment. Four to six weeks later I control the success of the treatment by the Wassermann reaction. In a number of cases the reaction has been negative and the infection apparently aborted.

Should we now cease all treatment and be guided in the further treatment by numerous Wassermann reactions repeated at regular intervals? Many authors do this and a great many abortive cures were reported from all sides. I myself have seen a number of cases treated in this way abroad, indeed some with a reinoculation. In spite of this, I personally believe it more certain, and in this I am on the side of the majority, not to stop treatment with a single course of treatment, but to keep up treatment for two years, even when serological and clinical evidences point to a cure. For the first year I advise two or three courses and for the second one or two.

After having treated and watched our patient in this way for two years and finding no serological or clinical evidences of syphilis, can we declare with certainty that he is cured and promise him that it is permanent? It is still too soon to decide this question positively. The time we have had in which to judge the effect on our patients has been too short. Personally, I am optimistic enough to answer the question affirmatively. However, should the patient feel doubtful or want to marry there are still two further tests at our disposal to learn the condition of the patient. The first of these tests is the provocative Wassermann, as proposed by Gennerich and Milian. The patient is given a moderate sized

dose of salvarsan and his blood examined over a period of two weeks, in the first week daily and then on the fourteenth day. Should any of these tests be positive it would mean that somewhere in the body there is a latent focus of living spirochaetes which have been stirred up by the salvarsan, which, of course, means that the patient is not entirely cured. This, however, does not always mean that he is still capable of carrying infection and the permission to marry could still, under certain conditions, be given. The second test consists in the examination of the cerebrospinal fluid, especially indicated in those cases in which the patient at any time has shown symptoms pointing to syphilis of the nervous system, such as severe headaches and attacks of vertigo. The cerebrospinal fluid is examined for the so-called four phases of Nonne, which consist of a positive blood Wassermann, positive Wassermann, lymphocytosis and positive globulin reaction. The peculiarities of these tests are more or less laboratory questions and will not be considered in this communication.

So far we have described the treatment of the primary stage of syphilis. Unfortunately, however, most of our patients consult us, if they consult us at all, only after the secondaries have appeared. They come to us with a roseola or papular skin rash, mucous patches, a general adenopathy, etc.

In such cases the clinical diagnosis is usually not difficult. Nevertheless, even in these cases a Wassermann test is advisable in order to absolutely confirm the diagnosis, and it will be positive in 100 per cent of cases. In this stage of the disease the patient is a great danger to society, since his lesions are swarming in spirochaetes and an innocent person can easily become infected from contact. In this stage salvarsan is a marvelous remedy to promptly control this dangerous infectiousness. But in such cases we must be careful in the use of the drug. As mentioned above the action of salvarsan may prove too powerful, since the enormous numbers of killed spirochaetes could set free a great

amount of endotoxins. Therefore it is wise to pave the way for salvarsan by giving one or two injections of mercury and afterwards give salvarsan in the manner already described. In such cases we can hardly expect to abort the disease; the relapses are frequent in spite of good treatment. Therefore we are compelled to give intermitting salvarsan-mercury courses of treatment for three to five years and sometimes even longer, according to the symptoms, and put our confidence in the Wassermann reaction insofar as a positive reaction is considered a symptom of syphilis, while a negative reaction, so far as prognosis and treatment are concerned, is not decisive. Heidingsfeld, of Cincinnati, basing his opinion on 442 cases which he had treated about $2\frac{1}{2}$ years, found that only 77 per cent of them gave repeated negative Wassermann's. In 23 per cent the Wassermann remained positive in spite of all treatment and in spite of the absence of clinical symptoms.

What can be done with these so-called latent cases where the spirochaetes have apparently become immune to both salvarsan and mercury? Should an energetic treatment be persisted in? Heidingsfeld has shown that his results were better when he treated such cases not specifically but with tonics or other arsenical preparations, such as sodium cacodylate. With this treatment he succeeded finally in changing some of the persistent positives into negatives.

In the late stage of syphilis, generally known as the tertiary stage, when, besides the skin and mucous membranes, the internal organs are also affected, we must not forget our old friend and helper, potassium iodide. The dose should, at first, be small, and if the patient shows no idiosyncrasy toward iodine, it should gradually be increased to six or eight gm. per day, best given in a concentrated form in milk or Vichy water. The same drug must be given in all malignant forms of lues. It is right here, however, that some of the most brilliant results have been obtained by the use of salvarsan. Rapidly progressing lesions, which formerly caused a loss of voice by a destruction of bone, or would

have killed the patient by perforating large blood vessels, can now sometimes be controlled by an injection of salvarsan. Besides the latter drug, in these cases we can also use calomel, which is very effective, instead of the salicylate of mercury. The calomel should be used in same strength as the salicylate and in emulsion.

If the cerebrospinal fluid of all luetics is examined it will show pathological alterations in a surprisingly large number; according to Ravautz, for example, in 70 per cent of all syphilitics in the secondary stage. Fordyce makes the statement in a recent communication, in which he takes up the treatment of syphilis of the nervous system, that just as soon as the spirochaetes enter the circulation the nervous system is attacked. This may show itself by a meningitis with clinical symptoms, or without symptoms. In the latter case the changes can only be detected in the cerebrospinal fluid. Fortunately these changes lead to organic changes in the nervous system in only a comparatively small number of cases. Furthermore, it has been shown that organic lesions occur very early in the cerebrospinal system. Indeed, they have been demonstrated as early as four months after the primary inoculation, and I myself have seen a case of central facial paralysis occur at the same time as a roseola. Naunyn also states on the basis of a very large number of cases that the infection of the nervous system occurs in the first year after infection and that it decreases later. Noguchi's discovery of living spirochaetes in the central nervous systems of patients suffering from paresis and tabes has demonstrated that these conditions are no longer to be classed as meta- or parasymphilitic conditions as formerly, but must be considered genuine lues of the cerebral or spinal nervous system. Salvarsan was used with great expectations in these cases, but unfortunately the results were very discouraging, in paresis not better than with other drugs; in tabes there was a slight amelioration of some of the symptoms. In other forms of cerebral lues, such as gummata, arteritis and serous meningitis, the results have been con-

siderably better than with mercury and the iodides alone. Since, however, the above mentioned pathological changes in the cerebrospinal fluid were found in all these cases, it has seemed expedient to inject salvarsan directly into the cerebrospinal fluid, since for anatomical reasons, salvarsan injected into the blood can not reach the spirochætes in the nervous system. This direct intraspinal method has produced better results. Unfortunately, however, the method is too recent to allow us to draw definite conclusions.

In the treatment of congenital and acquired lues in children we also use salvarsan. In these cases also the intravenous method is the best; unfortunately the technic is naturally more difficult than in adults; if we choose the median basilic vein at the elbow it is usually necessary to expose it. To avoid this we can use the jugular, or as recommended by Holt, the posterior auricular vein which dilates when the child cries, and so the introduction of the needle is not so difficult. For children under eight months we use about 0.075 gm. neosalvarsan and for older children approximately 5 mmg. for each kilo. Of the mercurial preparations calomel is to be recommended because it is well borne, while inunctions with mercurial ointment are not so good. In very small children sublimate baths are very effective.

From the foregoing it is very apparent that in salvarsan we have a very effective addition to our armamentarium of syphilitic drugs. However, it is not to be forgotten that this drug should not be used in a haphazard manner, and in order to use it with safety we must be perfectly familiar with its bad effects, the contraindications against its use, and the dangers incident to its use.

Why this is so is very evident when we remember that salvarsan contains 34 per cent of pure arsenic. Chemistry teaches us that arsenic coagulates albumin and that the function of a cell, especially excretory epithelial cell, which is irritated by arsenic, can either be hindered or absolutely stopped. If the kidneys are effected anuria will develop, the secretion of urine becomes impossible, arsenic accumulates

in the system and finally the evidences of poisoning appear. Therefore cases in which we know the elimination of arsenic is imperfect or in which there is no elimination at all, as in diseases of the kidneys, liver and intestinal tract, must be excluded. Furthermore, it is advisable to avoid administering it to cases in which there are marked disturbances in the vascular system, such as non-compensating valvular lesions, advanced myocarditis, aneurysms or pronounced arterio-sclerosis, advanced tuberculosis, alcoholism and all other cachectic conditions are also contraindications or at least signals which should put us on our guard unless these lesions are caused by lues. If all these contraindications were observed, according to Neisser 99.9 per cent of all salvarsan administrations would either be followed by no symptoms or a very slight reaction, such as slight elevation of the temperature, vomiting or diarrhea. These symptoms generally occur four or five hours after the injection and disappear entirely on the next day. Wechselmann and others maintain that these symptoms have absolutely nothing to do with the salvarsan but are caused by dead saprophytic bacteria which accumulate in the boiled water, or by lead and other metallic substances which comes from the glass vessels, the so-called glass or water error. This explanation seems somewhat far-fetched and at the present time is not concurred in by most authorities. Indeed it seems probable that the above mentioned symptoms are evidences of a slight arsenic poisoning.

Another toxic symptom is the so-called Parisch - Herzheimer reaction, a vasomotor disturbance which occurs in different degrees in different organs. The specific lesions become more pronounced, for instance, the roseola seem larger and of a darker color. Most authorities believe it is caused by the endotoxins resulting from the killed spirochaetes causing a dilatation of the capillaries and a resulting edema in the surrounding tissues.

Many authorities consider the much-feared late nervous manifestations a late Herzheimer reaction. These manifes-

tations are pareses or paralysis of the cranial nerves, especially the acoustic, the optic and the facial. Symptoms dependent upon a meningismus, such as epileptic attacks, arise from the same source. A tolerably large number of these cases were observed when salvarsan was first used. The experiences with atoxyl, which lead to total blindness in a number of cases, were still fresh in the memory of the profession, and it was only natural that many should protest against the use of salvarsan. But Ehrlich, Neisser and Wechsellmann tried to show that it could not be salvarsan which caused these nervous manifestations, since the best treatment for such cases was another injection of the drug. They maintained that the cause of the trouble lay in an insufficient treatment which resulted in foci of live spirochætes remaining in the system, especially in the cerebrospinal fluid into which salvarsan could not penetrate. These foci therefore were only irritated by the treatment and assumed the character of a primary lesion in that they produced a local inflammatory reaction by which the nerves, especially at the points where they left the skull through narrow foramina, were affected through the pressure.

Contrary to Ehrlich and his followers, Finger and others declare that salvarsan leads to a locus minoris resistentia in the central nervous system because of its neurotrophic peculiarities, thereby allowing the syphilitic process to gain a firm foothold on the nervous system which, weakened by the infection, offers less resistance to the toxic action of salvarsan. There are still others who do not blame salvarsan at all but think these nervous symptoms would occur sooner or later anyhow. Whatever may be the cause, it is a fact that today we see these manifestations less often, since we do not use large doses of salvarsan, and use mercury along with the salvarsan.

Fortunately the nervous manifestations in most cases are not fatal. However fatalities have followed the use of salvarsan and will, I believe, occur in the future, but not so often as in the past.

Meutberger of Strassburg collected reports of 274 salvarsan and neosalvarsan deaths up to 1914. Smith of Wurzburg, after thorough revision, reduced the number to 172, since in 102 cases the evidence against salvarsan was not strong enough. Of these 172 deaths the majority occurred in young adults between 20 and 40 who, aside from lues, were perfectly healthy. The fatalities occurred in all stages of the infection and bore no definite relationship to the number or size of doses.

These deaths can be roughly divided into three groups. In the first, the patients died immediately after the injection without any previous alarming symptoms having occurred. In the second group the symptoms occurred several days after the injection. The symptoms consisted in severe headaches, general malaise, severe vomiting, diarrhea, paralysis of the spincters, dyspnea, cyanosis, convulsions, finally coma and death after three or four days. At autopsy there was generally found a serous meningitis and a hemorrhagic encephalitis. In group three, there occurred retention of urine, hematuria and convulsions which lead to death after a few days. In these cases the postmortem showed marked degeneration of the kidneys and liver very similar in every respect to that found experimentally after arsenic poisoning.

But even in these desperate and apparently hopeless cases a remedy has been suggested recently which in many cases seems to prevent the catastrophe. This, too, we owe to Ehrlich. In the British Medical Journal of May, 1914, in the discussion of the fatalities due to salvarsan which were produced by a hemorrhagic encephalitis, he called attention to the great dilatation of the blood vessels which is always found in these cases, and attributed it to the fact that adrenalin, the normal regulator of the vascular system was not present in sufficient amount, just as it is deficient in Addison's disease and other hypoplastic conditions of the suprarenals. This deficiency leads to the so-called status thymolymphticus.

Milian of Paris was the first to demonstrate that in those cases in which a bluish red swelling of the face and lips and dyspnoea occurred during the injection of salvarsan, an immediate injection of adrenalin caused the status lymphaticus to disappear, or that the symptoms did not occur at all if the adrenalin was administered before the salvarsan. Furthermore, severe diarrhea and retention of urine were relieved by repeated injections of adrenalin. Indeed he has saved an apparently hopeless case of hemorrhagic encephalitis with this treatment. Others, using the same remedy, have had similar results.

Even if we must confess that adrenalin will not prove a panacea for all these desperate cases in the future, do not the numerous wonderful successes attained by this remedy (salvarsan) more than counterbalance the deaths due to its use, especially since these fatalities are decreasing? For this reason we must admit that salvarsan, used simultaneously with mercury, is the best treatment of syphilis, and it would certainly be foolish to try to get along without this drug, as many advocate.

Selected Articles

CERTAIN FACTS OF INTEREST ABOUT THE CARDIOVASCULAR SYSTEM.

BY H. A. HARE, M.D.,

Professor of Therapeutics and Diagnosis in the Jefferson
Medical College of Philadelphia; Physician to the
Jefferson Hospital.

As I suppose that the medical men whom I address today represent not any one specialty or field of endeavor in general medicine or surgery, I have decided that it may be well to discuss several separate themes rather than one topic. One of these themes deals with a subject which is so familiar at first glance that I am almost afraid to mention it—namely, blood pressure—and yet I am confident that, hackneyed at it may appear, it still presents aspects which deserve the most careful attention from all medical men, be their sphere of action what it may. I do not propose to devote any time to the subject in general, or debate the question of systolic pressure—this is indeed hackneyed—but rather to call your attention to the fact, well recognized but little followed, that the mere systolic pressure is by no means as important as the diastolic pressure, or as important as the pulse pressure, or the difference between diastolic and systolic pressure. Yet I think that it is the custom of many men to estimate systolic pressures and to ignore the others, although the diastolic pressure gives us information as to the state of the blood vessels, whereas the systolic is a combination of the effects of the heart and vascular state.

If we apply these facts to a series of concrete cases, what do we find? In pregnancy the diastolic pressure is practically normal, although the pulse pressure may be a little

above normal, thereby giving a systolic pressure which is a little plus, the cause being the slight cardiac hypertrophy which is thought to be fairly constant in this state. In an abnormal pregnancy due to toxemia the physician who relies upon the discovery of a high systolic pressure as indicative of trouble will be misled if for any reason the heart is tired or weak, whereas if he relies on the diastolic pressure, this factor of error is largely avoided. Again, we meet with cases, usually in men in or past middle life, who present evidence of having a tired heart by reason of its feeble first sound, or because of irregularities or missed beats. An estimation of the systolic pressure may show it not to be greatly in excess of normal for the age because the heart is too tired to produce a very high systolic pressure, but the findings of a high diastolic pressure will indicate vascular spasm or fibrosis, whereby the vessels are narrowed and the work of the heart increased. Manifestly in such a case two things are indicated, namely, physical or mental rest, which induces cardiac rest, which, in turn, is produced not only by the lack of demand for labor on the part of the heart, but by the relaxation of the vessels which rest induces. Further, the resistance of the column of blood in relaxed tissues is far less than in those which are exercised. It is in this type of case that moderate massage, begun after some days of absolute rest, does so much good, particularly if small doses of digitalis and arsenic are used. It is in this type of case, too, that the nitrites do good, particularly if on palpating the vessels they are found not to be hardened or thickened even if they are tense.

There is another type of case in which the systolic pressure if taken alone will lead to the conclusion that the circulation is normal, when if the diastolic pressure is estimated it will be found to be abnormally low and inadequate. In these cases the pulse pressure may be great because the heart still being vigorous endeavors to fill partly empty vessels—that is, it endeavors to compensate for lack of vascular tone and so becomes untimately tired, because it not only

pumps too hard for its strength to last, but also because its increased speed per minute shortens its periods of rest or recuperation. Few of us realize that a heart which beats at 82 instead of 72 beats 14,400 extra times in a day. In these instances rest is again more important than drugs, and after the patient has accumulated enough energy by rest of the nervous system as well as the heart to respond to alcohol-rubs, massage, and cold douches, these may be used with advantage, but if used too early will make matters worse. After the heart gets tired out digitalis *with rest* will do good, but where the systolic pressure is high through the efforts of a strongly beating heart it rarely does good. Indeed, in many of these cases, before the heart becomes tired out, the patient complaining of the heavy beating of this organ, the use of aconite and belladonna will give the best results, for the aconite acts as a cardiac sedative and the belladonna tends to increase the tone of the splanchnic vessels.

In still another type of case great difference between the diastolic pressure and the systolic pressure will help to reveal aortic regurgitation, when the murmur of this lesion may for various reasons be too feeble to be heard. The suspicion of this lesion becomes a surety if, when the patient is prone, it is found that the pressure in the leg is from 40 to 10 points greater than in the arm.

An estimation of the diastolic pressure also enables us indirectly to determine whether the high tension is chiefly due to spasm or fibrosis, for if the diastolic pressure falls considerably under the use of a dose of nitroglycerin, although the systolic pressure may be less modified, the condition can not be fibrosis chiefly since the nitrites can not relax stiffened or thickened or roughened vessels. To put it differently, lack of fall of diastolic pressure under the nitrites indicates fibrosis. Clinically it is also true that in those patients who have vascular spasm the disagreeable fulness or headache of the nitrates is often easily induced, whereas in the fibroid cases headache from the nitrites is less prone to

occur, probably because the cephalic vessels are not suddenly relaxed.

Some years ago Gibson in Edinburgh and myself in this country developed the value of studying systolic pressure in croupous pneumonia. You will recall that the rule was that when the pressure expressed in millimeters of mercury was well above the pulse-rate per minute the patient was to be considered as doing well, at least for the near future. I still believe that this rule is correct, but, like all symptoms, it has its exceptions—that is, it does not hold in every case and is of no value in children. It is not so important that the blood pressure remain high as it is that the pulse rate shall remain low, and a speeding up of the pulse so that it approaches the pressure, as expressed in millimeters of mercury, while the pressure remains constant, is often the first sign of trouble, since it indicates that to maintain pressure the heart must work faster, or that the heart muscle itself is beginning to tire and so is endeavoring by more frequent contractions to compensate for its lack of thrust at each beat. It is at this time that digitalis and belladonna do much good if toxemia is not too profound, since the digitalis may steady the heart, and the belladonna, as in the case already stated, equalizes the circulation by controlling the splanchnic circulation. Here again, however, I am convinced that the estimation of the diastolic pressure in order that we may determine the state of the blood vessels, and the study of the pulse force, or the difference between the diastolic pressure and the systolic pressure, gives us greater information than the estimation of the systolic pressure. In other words, diastolic pressure which is abnormally low may be exhausting the heart in the endeavor to fill relaxed vessels, and the indication is not so much to stimulate the heart to greater endeavor, but to raise the diastolic pressure to normal. For this purpose placing the patient in the open air and giving atropine hypodermically seem to be our only resources, and often they are efficacious.

Incidentally, let me reiterate what I have often insisted upon on other occasions, namely, a protest against the use of nitroglycerin with or without other drugs for the purpose of helping a failing circulation. How this well-nigh universal plan ever came to be practiced I do not know. There is no use of nitroglycerin in pneumonia except possibly in the early stages of the disease when the patient is a sufferer from hypertension before he is stricken, and this pressure is increased by the fever of the acute illness.

A few moments ago I spoke of fibrosis of the vessels in distinction from spasm of their muscular walls. There are several points in connection with fibrosis that are of importance. The first of these is that contrary to the general view fibrosis is not always universal, and neither is spasm for that matter. We are too prone to think that because we find thickened or narrowed vessels in the wrist or in the temples the whole vascular tree is likewise affected, and yet daily observation in the autopsy room and at the bedside reveals the error of this view. Blushing and physiological hyperemia are continually taking place as other parts become ischemic. Spasm of the coronary vessels induces anginoid attacks in many persons whose general vessels seem practically healthy and whose pressure is not abnormally high. Not rarely the vessels of the coeliac axis suffer from fibroid change while the superficial vessels escape, and how often are we surprised to see an apoplexy terminate the life of an apparently healthy man while another patient with advanced disease of all the vessels that we can palpate, or see, lives on for years with a blood pressure which is extremely high! In the first case the cerebral vessels are chiefly diseased; in the latter they are least affected. These facts probably explain why in some cases of fibroid kidney the patient dies early with fairly good vessels elsewhere, whereas in another case of general fibrosis of the vessels in which those of the kidney chiefly escape the patient lives a long time.

It is not out of place at this point to say something of the therapy of the cases of spasm and fibrosis of the vessels. The only way to determine the proper dose of the nitrites for a given case is to control their dose by observation of the diastolic pressure. Nitroglycerin is wrongly given in the majority of instances. Better give so little as 1-300 grain every two or three hours than 1-100 t.i.d., for a dose given at the interval of every eight hours act at most for an hour and leaves the next seven hours drug free. It is to be recalled that relaxing the vessels has a value over and above the decreased resistance to the heart and the stress on the vessel walls. The relaxation of the vessel permits a better supply of blood to the vessel walls by the vasa-vasorum, which are compressed if the vessel is in spasm.

Careful consideration of the subject will show that although the use of nitrates can be of little value in cases of vascular fibrosis, the employment of electric cabinet and Neuheim baths and the use of certain alteratives, particularly that ancient, but useful, combination called Donovan's solution, may, and often does, lower pressure and greatly improve cardiovascular tone. Exactly how they do this is not as yet clear, but clinical experience proves that such results occur, so that I have come to consider the electric cabinet bath with massage the best method of treating arterio-capillary fibrosis that we have.

In this connection I wish to speak of what I have on other occasions called the "pathological norm" in persons who have hypertension. This new normal is designed by nature to force blood in adequate quantities through vessels so narrowed, unyielding, and tortuous, that if it did not exist the tissues would be starved. A high pressure, in other words, is essential to an approximately healthy existence, and if the physician succeeds in lowering the pressure to what would be normal in health he finds the patient, heretofore vigorous, feeling feeble, dyspnoëic, and discouraged, with an increase in the disturbance of digestion, renal secretion, and cardiac action. The point for us to determine is whether

the high pressure is in excess of the needs of the individual and if it is great enough, to endanger the heart by fatigue. Sooner or later the pressure will fall as the result of the persistency of the pathological process which caused it to be high, and this fall is due, as we all know, not only to cardiac fatigue and degeneration, but also to change in the arteries as well, for the muscular coats of these vessels degenerate as the heart muscle degenerates, and the radials and temporals may then be seen so relaxed and dilated as to resemble veins rather than arteries. Such a state means the beginning of the end, although with care the end may be much postponed. I have not found this terminal state of the arteries generally recognized by clinicians, and I would call your attention to it. As a rule the patient, who has seemed fleshy and strong, it may be, begins to lose weight rapidly because his tissues are not properly nourished by an adequate blood current and vascular-tissue-interchange is impaired.

There is still another type of high circulatory pressure which deserves attention. I refer to the venous pressure which is sometimes met with in cases of ruptured compensation in valvular disease when the patient is found livid and cyanotic with distended jugulars and dusky extremities. Now, it is in just this condition that we have made the mistake of departing from the custom of our forefathers, who would have resorted to venesection. It is really remarkable the degree, and speed, of relief which venesection gives these patients, and furthermore, cardiac stimulants and supportants act with greater vigor and promptness if such venesection is practiced. Of course, judgment is to be used as to the amount of blood which is withdrawn. If the patient is bulky and plethoric he can lose more than a pint with advantage, whereas if he is lean and lank the withdrawal of from 4 to 6 ounces may be adequate. Personally, I am convinced that the act of venesection in itself has in it therapeutic value, because I have seen benefit accrue so short a time after the vein was opened that it seemed incredible that

the loss of so small a quantity of blood could have relieved the heart or general venous system. In the case of a medical man whom I bled, he told me that the blood had scarcely begun to flow before he had a delightful sense of relief. Possibly a reflex takes place through the nervo-vasorum. I think I have gotten less good results in cases which were dropsical than in those which have only venous engorgement, a condition which often comes on rather suddenly. The possible explanation of this is that in the dropsical cases the heart has been tired or degenerated for a long period of time, whereas in venous turgescence quick relief enables the heart, which is not badly degenerated or exhausted, to pick up.

The study of the influence of anesthetics upon the vital functions of the body still continues to be of absorbing interest and importance. One would suppose that the host of investigators who have dealt with this subject during the last fifty years would have thoroughly exhausted it and arrived at definite conclusions in regard to even minor points, but this is not the case. At the present time we think it may be fairly stated that the depressant influence of chloroform upon blood pressure is universally recognized. It is also true that instead of deepening chloroform anesthesia at the moment when the surgeon is about to perform the most critical part of his operation, this plan has given place to the practice of letting up on the anesthetic at this moment, because the chloroform in no way protects the vital centers from the shock, and pushing the drug at this time subjects these centers not only to the shock but to the depressant effect of the drug simultaneously.

It has long been known that a very large proportion of deaths under chloroform occur in the earliest stages of anesthesia, at a time when it is natural to believe that so little of the drug has been inhaled that danger can not be at hand. Various explanations have been brought forward for this undisputed clinical fact. Whether it is because the vagus is unduly stimulated and that this has an inhibiting effect

upon the heart, depressed also by the influence of fear and the influence of the drug, is a question to be answered probably in the affirmative.

In the Proceedings of the Royal Society of Medicine for June, 1914, Levy brought forward in a forceful way certain views which he holds in regard to this matter. He asserted that light chloroform anesthesia is prone to produce a condition of ventricular fibrillation, and claimed that one of the first principles of chloroformization is to keep the patient fully anesthetized and to make its administration continuous. He does not advocate excessive administration to the point of profound narcosis, as he thinks this is uncalled for except under rare circumstances, but he believes that the induction of anesthesia should not only be continuous but progressive, and that the strength of chloroform vapor should be increased as rapidly as is possible without distressing the patient, in order that he may be brought under the full influence of chloroform as quickly as is safe. Surely this is a view which is in strong contrast to that which has long been generally held. Levy even goes to the extent of claiming that a vapor strength of four per cent may be used with impunity when attained by progressive stages, although he admits that it should not be used for long and should not be used at all unless necessary to rapidly carry the patient into full anesthesia. Rarely, he thinks, a two-per-cent vapor is sufficient. His point is not so much the percentage of vapor as the amount required to carry the patient quickly through the inductive stage.

Levy emphasizes another point, with which most anesthetists of experience are certainly in accord, namely, that the patient should be entirely undisturbed until fairly under the anesthetic, and well says that it is too frequent a practice to attempt to save time by scrubbing or shaving the skin during the period of induction. This may produce excitement, and even the bandages should be left undisturbed until consciousness is absolutely abolished. So, too, the greatest care should be exercised that the skin incision in

the early stages of the operation should be performed under full degree of anesthesia, with the pupils slightly dilated and with only a faint corneal reflex.

Levy believes that the respiration is the most important function to watch, because by this means we are able to determine how much chloroform vapor is being taken into the body, but he also believes that the pulse should be studied in order to determine the circulatory state, for an irregular pulse may be followed by ventricular fibrillation with startling rapidity. In the same way that he protests against letting up on the anesthetic too early, believing that it should be continued until the final bandaging is completed. He strongly protests against any attempt to rouse the patient, and asserts when everything is completed he should be put back to bed with as little disturbance as possible.

If I have not wearied you by going from one subject to another too rapidly, may I say a word in regard to the vascular state in collapse and shock? It is interesting to recall that nearly thirty-five years ago Horatio C. Wood lectured upon the beneficial effect obtained by the administration of atropine in these conditions, and in the earliest edition of my text-book on "Therapeutics", published twenty-five years ago, I spoke of this use of atropine. In 1892 and 1893, in a research which I made at the instance of the Government of Hyderabad, India, I pointed out the protective value of atropine when given prior to the use of chloroform, and during all these years I have insisted upon the importance of vascular relaxation as a dominant factor in the collapse complicating acute illness and in surgical shock. It has therefore been somewhat amusing to me to note that during the last few years the use of atropine in these conditions has become universally recognized by surgeons, and, without in any way wishing to diminish the credit which Crile deserves for his investigations, I may point out that vascular relaxation and the benefits of atropine were well known many years before he began his observations on this subject, and

so called the attention of his surgical colleagues to this matter.

Concerning the use of strychnine in shock, it is interesting to recall that some years ago it was the custom of surgeons to give very large doses of this drug, and that recently this employment of it has been entirely out of fashion on the ground that it increases shock. The question that I would like to bring forward for your consideration is whether this condemning of strychnine is not worse than its abuse heretofore, and does not depend on the erroneous employment of this drug. Given prior to an operation I believe its effect is harmful, since by acting as a nervous irritant it renders the nervous system more susceptible to shock, but after the operation I still think it does good in many instances by rousing the shocked nervous system to increased endeavor. The claim that it is useless because the vasomotor center is paralyzed in shock is in the great majority of instances erroneous. The vasomotor center is not paralyzed in the sense that it is organically destroyed. Its function in many instances is impaired but not entirely wiped out, and the use of strychnine by stimulating reflex activity, as well as that of the vasomotor and respiratory centers, may be advantageous. A woman who has fainted because of some severe shock is often resuscitated by slapping her with a wet towel, or holding ammonia to her nostrils, in which instance her vasomotor center is stimulated to activity so that it regains control of relaxed vessels and establishes a normal circulation. In such an instance the vasomotor center is not paralyzed, but its function is temporarily in abeyance.

As I said in the beginning of this paper, I have deliberately taken up a number of themes in connection with circulation rather than one particular theme, because it was my desire to at least attempt to present something which would be of interest to all of my hearers, most of whom probably meet in their daily practice with one or more of the subjects which I have brought to your attention. I trust,

therefore, that, although I have covered a number of topics, I have not attempted too much, and that in the discussion which I hope will follow, much of greater interest will be presented, since it will represent the views of men of experience, and no one knows better than the active general practitioner that experience teaches and that the results of experience are of value to every member of our guild.—*The Therapeutic Gazette*.

Extracts from Home and Foreign Journals

SURGICAL

DEATH FROM HEMORRHAGE FOLLOWING PERITONSILLAR ABSCESS.

Dr. T. E. Carmody (*Col. Medicine*, Sept., 1915) reports a case of this kind in a child three years old. The first hemorrhage occurred on the 12th day of an attack of acute follicular tonsillitis, the abscess having ruptured spontaneously. The author advises that all such cases should be carefully watched, and the abscess opened when pus is found to be present. For the past eight years he has employed a method resembling that lately described by Killian and Hays. This operation is performed preferably with angular forceps, but may be accomplished with a straight forceps. The instrument is introduced from the opposite side of the mouth with the point extending between the anterior and posterior pillars at their junction and between the plica and the tonsil, and forced upward, outward and backward, thus entering the supratonsillar fossa where it will most likely encounter pus. If the forceps is then opened and withdrawn the pus will be seen to follow between the blades and will continue to discharge through this channel. We may, however, fail to find pus in the supratonsillar fossa, and in this case the forceps should be withdrawn, but made to sweep down into the posterior fossa, and failing to find it there, into the anterior fossa, but this latter is seldom necessary. The advantages of this method are: (1) The opening is made at the actual point for drainage, i. e., at the most dependent portion of the abscess. (2) The opening can be made wide enough so as not to close easily. (3) No muscle fiber or mucous membrane is cut. (4) A dull

instrument is used and there is no danger of wounding a vessel.—*The International Journal of Surgery.*

RECTAL ANESTHESIA IN THYROIDECTOMY.

Dr. W. Lathrop (*Pa. Medical Journal*, November, 1915) recommends Gwathney's method of oil-ether colonic anesthesia in goiter work. He has operated upon one hundred and eleven cases of goiter (hyperthyroidism, 15; parenchymatous, 38; colloid and cystic, 58) from June, 1914, to September 9, 1915, under this anesthesia, and from his experience with a large number of these operations, before adopting it, he is convinced that we have an ideal method and one superior to that by inhalation. The advantages of this method are: (1) It is most valuable in head and neck operations. (2) There is no fear, as is so often seen in the usual method. (3) The pulse and respiration, as a rule, remain near normal, or do not vary much from their condition when the operation was commenced. If rapid, as in hyperthyroidism, it remains rapid but does not increase as when fear has added to the apprehension of the patient. (4) There is less tax on the lungs and kidneys. (5) Operations can be done without the knowledge of the patient, which is surely valuable, and must play some part in anoci-association, while Crile's technic can be carried out if desired.—*The International Journal of Surgery.*

CHLORETONE IN BURNS.

Bradburn, in the *New Orleans Medical and Surgical Journal*, reaches the following conclusions:

1. Chloretone applied as a powder is absorbed directly from the burned area.
2. The dosage may be so regulated that it is possible to obtain a definite action.

3. The writer believes that pain can be appreciably lessened, and proper rest and sleep obtained for the patient.

4. It will markedly reduce the number of injections of morphine.

5. Its early use may be of some value in the lessening of shock.

6. A definite dosage should be administered and mixed with some other powder as a vehicle. The writer prefers the compound stearate of zinc, as it seems to come off more readily in the bath than any other dusting powder that he has used.

7. The essential thing, in order that one may not hinder the action of the chloretone, is the daily, or twice daily, bath of warm saline.

8. For each case a definite dosage for the desired effects should be established, until further data are obtained in this method of administration, and 15 grains should be the maximum in a child of twelve years to produce stupor.—*The Medical Brief*.

MEDICAL

OCCURRENCE OF ACIDOSIS IN CHILDREN.

Williams has analyzed the symptoms in thirteen cases. Of these cases five occurred in boys, the remainder being girls. All the children were under 11 and over 3 years of age. Three patients presented on admission symptoms suggestive of meningitis, but on examination of the cerebrospinal fluid, which was under considerable pressure, showed no cytologic changes or organisms; examination of the urine, however, showed the presence of acetone and diacetic acid in varying degrees. Two cases of mussel poisoning (mytilotoxin) and one case of ice-cream poisoning showed marked acidosis. In the two cases of mussel poisoning nervous symptoms were predominant, whereas in the ice-cream

poisoning there was pyrexia with great remissions of temperature. In one patient acidosis preceded pneumonia (for seven days) and in another patient the acidosis occurred during the course of a pneumonia, and in a third patient, whose urine was found on admission to contain sugar, the sugar quickly disappeared, but the patient developed signs of pneumonia with acidosis, which were followed by an empyema. In one case admitted in a practically moribund condition, the postmortem revealed suprarenal hemorrhage. One patient sent into the hospital as dysentery suffered from vomiting, colicky pains in the abdomen, with blood and mucus, symptoms suggestive of an intussusception; the intense acidity of the urine and the quick response to treatment by alkalis showed the symptoms to be caused by acidosis due to some unknown cause. A child admitted into the hospital drowsy and irritable, with a high temperature, developed, at the end of a week, a systolic murmur. The urine on admission was acid and contained acetones and diacetic acid (no salicylates were given); alkali treatment and glucose caused loss of drowsiness.

Williams urges that it is important in all cases of doubtful origin in young children that the urine should always be carefully examined for diacetic acid and acetones, as well as for the *bacillus coli*. Treatment consisted of sodium bicarbonate in doses up to 1 dram hourly in an effervescent mixture, and potassium citrate, half a dram, with glucose, 1 dram, by rectum every four hours. — *The Journal of the American Medical Association*.

NEOSALVARSAN IN THE TREATMENT OF TABES.

Nicolas and Pillon express the opinion that the administration of neosalvarsan in tabes, since it frequently brings a distinct relief from the symptoms, should be given preference over all other therapeutic measures in this disease. In a case which they report, the patient, a man aged fifty years, suffering from tabes, incapacitated by the disease, was

completely transformed by neosalvarsan treatment. Five intravenous injections of 0.3 gram to 0.6 gram were first administered at weekly intervals; after the last had been given distinct improvement was already manifest, the patient walking far more easily and being freed from the previously existing severe pains. An additional injection of 0.75 gram, however, was followed by sudden prostration; the treatment was thereupon given up for six weeks, during which, nevertheless, symptomatic improvement continued. At the end of this period, three weekly injections of only 0.3 gram were given, but on each occasion toxic effects followed. Intramuscular injections were then resorted to, and were perfectly borne. The improved condition already secured had been maintained for three months at the time of writing.—*The Practical Medicine.*

OBSTETRICAL

CESAREAN SECTION OF THE CERVIX.

Baisch relates that none of the eleven women whom he has delivered by extraperitoneal cesarean section behaved afterward as if there had been a laparotomy. There was no tendency to paralysis of the bowels. Recovery was amazingly simple and rapid in comparison to the convalescence after classic cesarean section. In a twelfth patient he renounced the extraperitoneal technic because the woman had been laparotomized twice, once for extra-uterine pregnancy and once for post-operative hernia. In another case sterilization had to be done. In both these cases the incision was low in the cervix, opening up the peritoneum widely. Recovery was simple and rapid in both, as also in the seventeen following cases of transperitoneal cervical cesarean section.

The incision, 10 c. m. long, is made in the linea alba, through skin and peritoneum, and the uterus is opened on the median line in the thin and stretched lower segment. No attempt is made to separate the bladder, or to make the in-

cision in the peritoneum transverse, or to loosen up the peritoneum. If necessary to tampon the uterus, after extraction of the child, the tampon is brought out through the vagina. No attempt is made to drain the abdominal cavity either through the abdominal wall or the vagina. The distended uterus holds the intestines out of the way so they do not present at all, and any fluids from the uterus are soaked up by two flat sponges wrapped in gauze compresses and worked down between the uterus and the abdominal walls. The incision in the uterus is re-enforced double with peritoneum sutured over the uterus suture, and this is covered with omentum. This prevents any escape of uterus contents into the abdominal cavity. By making the incision in the uterus in the most stretched segment, the coaptation and suturing of the thin walls proceed with special ease, and during the involution of the organ there is no traction or pulling aside of the walls. The fold of peritoneum in that region is so voluminous that it can be laid in a double fold over the suture in the uterus wall; there is not such an excess of peritoneum in the fundus region, so this is impossible elsewhere. Conditions therefore permit as simple and rapid recovery as after the extraperitoneal technic.

Only thirteen of the total nineteen cases treated by this transperitoneal technic were "clean" cases. The others had been repeatedly examined by midwife or obstetrician, without gloves, and in several the membranes had ruptured twelve, twenty or twenty-four hours before. Two of the women were already slightly febrile and the fluids in the uterus were fetid. Labor had dragged along for days in many cases; in two primiparas of 40, seventy hours had elapsed since the birth process had begun, and with several others, thirty or forty hours had elapsed. In every instance the puerperium was normal in every particular, although the conditions were in many of the cases less favorable than in the extraperitoneal series. In the two febrile cases, perforation of the living child had even been contemplated. The children were all delivered alive but one died from an intra-

cranial hemorrhage; the operation had evidently come too late in this case. No high forceps, prophylactic version, premature delivery or a pelvis enlarging operation was required in any of the cases. The operation was done on account of contracted pelvis, rigid birth passage in elderly primiparae, cicatricial atresia of the vagina, etc. Eight of the women were allowed to leave the clinic the tenth or eleventh day. The transperitoneal technic thus proved to have all the advantages of the extraperitoneal method and to surpass it in some respects.—*The Journal of the Am. Med. Asso.*

TREATMENT OF UTERINE CANCER.

Prof. L. Prochownik (*Zentralbl. f. Gynaek.*, No. 35, 36, 1915), presents a statistical study which is of especial interest since it comprises the long period of 36 years (1877-1913). During the first part of this period (1877-1913) the treatment of cancers of the uterus was generally palliative; then, until October, 1913, radical operation was the method of choice, since which time radiotherapy has been employed systematically in his practice. Of the 521 cases upon which the author bases his conclusion 405 were treated by operation, an operability of about 60 per cent. There were no deaths among the cases of supravaginal amputation; 7½ per cent among those of carcinoma of the fundus; 11 per cent among those operated on by the vaginal route and 20.3 per cent among those in which the abdominal operation was performed. Metastases following operation were observed in only two instances. The end-results (over five years) were as follows: Supra-vaginal amputation, 65 per cent; vaginal removal of cancers of the fundus, 71.4 per cent; in all those operated on per vagina, however, only 13.4 per cent, and excluding the number of operative fatalities, 15 per cent. In the cases of abdominal hysterectomy the percentage of permanent cures was 16.2 to 21 per cent.—*The International Journal of Surgery.*

Editorial

PUBLISHER'S NOTICE—The Journal is published in monthly numbers of 48 pages at \$1.00 a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money order, draft, or registered letter, should be addressed to the Business manager, C. S. Briggs, M. D. corner Summer and Union Streets, Nashville, Tenn.

All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

INCREASING MORTALITY.

The annual death rate from cancer, cardio-vascular and cardio-renal diseases including apoplexy, from diabetes, and in fact from all diseases of old age, is increasing from year to year, and the probabilities are that the increase will continue unless there is some very radical change in the mode of life of the American people.

The prohibitionist probably attributes the increasing mortality from these diseases to alcoholic drink and feels that when nation-wide prohibition comes, the tide will turn and the diseases of old age will really belong to old age instead of dropping back into middle age as at present. But careful study of the actual facts will show that the love of strong drink has been slowly but surely burning out since the discovery of America, and therefore were strong drink the most potent factor in the production of these diseases, the mortality rate should be diminishing instead of increasing, but such is not the case. Furthermore, Germany, England and Sweden show a lower mortality from these diseases than the United States, and yet the consumption of alcoholic beverages in Germany and England, at any rate, is certainly as great, if not much greater, than in the United States. We do not write the above as a plea for strong drink, but simply quote actual facts. We have written and rewritten in these

pages arguments against the use of such strong drinks as absinthe, brandy and whiskey. They should and will be abolished, unless perchance the will of the people outstrips legislation and makes abolition unnecessary. But the facts eliminate liquor as a potent factor in the production of the diseases of old age.

Overeating and lack of exercise, ignorance in regard to the laws of personal hygiene, the high cost of living, the mad rush to outstrip the other fellow and the idea that physicians are to be summoned only after the human machine has halted by the wayside with a missing carburetor, a choked exhaust or some other ailment, are some of the factors in the production of this increasing mortality which are as important, if not more so, than alcohol. Our whole mode of life is so artificial and so foreign to all laws of nature that it is not surprising a penalty is exacted in the form of an ever increasing mortality.

Never before probably in the history of the human race have environmental influences played such an important part, never before has the physical had so much difficulty in keeping pace with the mental. In the short space of fifteen years the automobile alone has become a considerable factor in curtailing exercise of the most wholesome kind—walking. And the desire for this luxury has made the already strenuous life even more strenuous. The increase in the cost of living is keeping pace with, if not outstripping, the increase in the mortality so marriages occur at a later age, and youth, answering the call of nature, sallies forth to worship at the altar of Venus to return inoculated with a germ which will later bloom in the form of some cardiac, vascular, renal or nervous weed which will weaken or destroy his body with its poisons.

Sedate middle age, having forgotten the hot fires and desires that once burned within, blames youth as a degenerate weakling, yet stuffs his paunch, with all that money can buy, heedless of the fact that all that goes in must come out and in doing so will tax organs which perhaps are already over-

taxed in eliminating poisons from the above-mentioned or some other weed, planted so long ago as to be forgotten. Sedate middle age is in such good health that he has not consulted a doctor for years. And yet his blood pressure may be getting high, his heart may be skipping beats, it may be a little harder to dress or his sleep may be broken by the frequent calls of nature, all of which in his ignorance he considers the natural order of events. He has the factory machinery, the automobile, the house roof gone over annually in order to keep them in first class condition, but so long as he is well the doctor is unnecessary. Even a layman, if he stops to think, knows that such reasoning is fallacious; the trouble is the layman does not stop to think until an ache or pain stimulates the brain cells. It is the duty of every physician to stimulate these cells before the ache or pain develops and so educate the public in the value of preventive medicine and in that way help put off the time of death and lengthen the span of life. It is likewise the duty of every physician to teach that overeating is as dangerous to health as overdrinking, and that lack of exercise is probably more dangerous than the other two combined, since it allows the body to become a stagnant cesspool, rotting and putrefying in its own poisons.—W. T. B.

“KIDNEY CURES” SEIZED.

Preparations Containing High Percentage of Alcohol Regarded as Not Only Worthless but Harmful.

Washington, D. C.—Action against several so-called “kidney cures” has recently been taken under the Food and Drugs Act by the United States Department of Agriculture. In one case the shippers of a preparation labeled as “A Sure Cure for Bladder and Kidney Trouble” were prosecuted on the charge of falsely and fraudulently misbranding the product. They pleaded guilty and were fined \$25 and costs by the court. This particular kidney “cure” was found to

contain over 41 per cent of alcohol. It was labeled "Old Jim Fields Phosphate Dill and Gin Mankind's Greatest Friend. A Sure Cure for Bladder and Kidney Trouble. It is also a Great Aid in Case of Urinary Trouble. Allenberg & Meister, Sole Agents, Memphis, Tenn." An analysis of the product showed that it contained no material amount of either dill or phosphate.

In another case 48 bottles of "Stuart's Buchu and Juniper Compound", prepared by the Stuart Manufacturing Company, Atlanta, Ga., was seized. The court issued a decree of condemnation, forfeiture, and destruction on the ground that the claims upon the label were misleading, false, and fraudulent. On this label the manufacturers recommended their product as a remedy for a great variety of kidney and bladder diseases and stated that the medicine contained 16 per cent of alcohol.

According to the medical experts of the department, alcohol is a kidney irritant and is dangerous in many cases of kidney disease. For this reason many physicians advise their patients who suffer from any kind of kidney or bladder trouble to abstain from the use of alcohol even in moderate quantities. Some manufacturers of kidney medicines, which contain considerable quantities of alcohol, also advise their customers to abstain from all alcoholic drinks, showing in this way that they know the harmfulness of alcohol in kidney diseases, even though they use it in their own preparations. It is the opinion of the medical experts of the department that such so-called "kidney remedies" as those recently seized are not only worthless but actually harmful, because of the amount of alcohol which they contain.

ASSISTANT SURGEON (MALE), \$1,800.

January 18, 1916.

The United States Civil Service Commission announces an open competitive examination for assistant surgeon, for men only. From the register of eligibles resulting from this

examination certification will be made to fill a vacancy in this position in the Bureau of Science, Manila, P. I., at a salary of \$1,800 a year and vacancies as they may occur in positions requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by re-instatement, transfer, or promotion.

The persons appointed as the result of this examination will be assigned to sanitary work in the Philippine Health Service.

Competitors will not be assembled for examination, but will be rated on the following subjects, which will have the relative weights indicated:

<i>Subjects</i>	<i>Weights</i>
1. Education	40
2. Experience	40
3. Publications, or thesis.....	20
	<hr/>
Total.....	100

Applicants must have graduated from a medical school of recognized standing, and in addition have had special training in bacteriology, either during their medical course or in postgraduate work.

Under Subject 3 a thesis may be submitted in lieu of or in addition to publications.

Statements as to education and experience are accepted subject to verification.

Applicants must have reached their twenty-first but not their fortieth birthday on the date of the examination.

The medical certificate in Form B. I. A. 2 should be executed in accordance with the instructions printed thereon. If it is impracticable for an applicant to appear before a government physician or a pension-examining surgeon on account of his distance from such a physician, the medical certificate may be executed by any reputable physician other than the family physician of the applicant; but a person

submitting such a certificate may be required to undergo another physical examination in case of appointment.

Each applicant must file with his application his unmounted photograph taken within two years. Tintypes or proofs will not be accepted.

Special attention is invited to the favorable conditions in respect to transportation, leave of absence, clothing, etc., in this service, printed hereon.

! This examination is open to all men who are citizens of the United States and who meet the requirements.

Persons who meet the requirements and desire this examination should at once apply for Form B. I. A. 2 and 2118, stating the title of the examination for which the forms are desired, to the United States Civil Service Commission, Washington, D. C.; the secretary of the United States Civil Service Board, post office, Boston, Mass., Philadelphia, Pa., Atlanta, Ga., Cincinnati, Ohio, Chicago, Ill., St. Paul, Minn., Seattle, Wash., San Francisco, Cal.; customhouse, New York, N. Y., New Orleans, La.; Honolulu, Hawaii; old customhouse, St. Louis, Mo.; Balboa Heights, Canal Zone; or to the chairman of the Porto Rican Civil Service Commission, San Juan, P. R. Applications should be properly executed and must be filed with the Commission at Washington prior to the hour of closing business on January 18, 1916. The exact title of the examination as given at the head of this announcement should be stated in the application form.

Issued December 11, 1915.

ENDOWMENT OF \$500,000 TO AMERICAN COLLEGE OF SURGEONS.

The American College of Surgeons begins the new year with an announcement that it has secured from its Fellows an endowment fund of \$500,000. This fund is to be held in perpetuity, the income only to be used to advance the pur-

poses of the College. By this means lasting progress toward the purposes of the Colleges is assured.

The College, which is not a teaching institution but rather a society or a college in the original sense, now lists about 3,400 Fellows in Canada and in the United States. Without precedent for swiftness of development it stands today a powerful factor both in the art and in the economics of surgery.

Primarily the College is concerned with the training of surgeons. But the significant fact in connection with the endowment just secured is that it has come from the surgeons themselves, inspired by a motive for better service to the patient. Ideals in the profession of medicine are living things. Probably no more convincing proof of this facts exists than the sacrifice which the surgeons of this continent have made willingly in order to raise the fund.

To begin with, these ideals are to find concrete expression along the following lines of activity.

1. Since the whole problem of the training of specialists for the practice of surgery is the primary purpose of the College, the Regents propose at an early date to present a clear conception of the College to the undergraduate medical students of this continent. The Regents, further, will ask each senior student of this group who has in mind to specialize in general surgery or any branch of surgery to register with the College. As these students, then, serve later as internes and as surgical assistants, they will be requested to report these facts to the College. The College, in turn, will systematically seek information as to the ability and character of such men; and the information thus obtained becomes the basis of admission to Fellowship in the College. In addition to this procedure, the Regents will insist upon the proper keeping of case histories, and they will endeavor to stimulate in these men in training right ideals of medical practice. In this program they ask the active co-operation of the faculties of the medical schools and of all practitioners of medicine.

2. Inasmuch as proper training in surgery is inseparably involved with the conduct and efficiency of hospitals, the College will seek accurate data on all matters which relate to hospitals. From time to time it will publish studies upon hospital problems, the purpose being always to be helpful to the hospitals. These publications, further, will inform recent medical graduates as to where they may seek adequate general or special training in surgery. To be concrete the College will deal with such problems as (a) the proper equipment for medical diagnosis, e. g., well equipped laboratories for chemical, pathological, and X-ray work; (b) the proper forms for case histories and the facilities for keeping these records; (c) the management and the curricula of the nurses training schools; (d) the specialization essential in any well organized hospital.

3. The College will ask the faculties of medical schools to consider the advisability of conferring a supplementary degree of proficiency in general surgery and in the various specialties of surgery.

4. The College will issue readable monographs, educational in nature, to the press, to the general public, to hospital trustees, and to the profession of medicine upon subjects of medical procedure and the whole meaning of fitness to practice surgery.

The entire impetus of the College springs from within its own membership. Necessarily that impetus implies reform. But there is a vast difference between reform preached at men and reform innate in the hearts of men which find expression at their own initiative. Whatever impetus the College possesses, it originates among the surgeons themselves. It is not an extraneous force or an "uplift" movement. But rather, out of the widely divergent views on many subjects among the Fellows, the aims of the College rise as those time-tried aspirations which are inherently the basis of all that is valuable in the vocation of surgery. The purposes of the College are concerned directly with matters of character and of training, with the betterment of hospitals and of the

teaching facilities of medical schools, with laws which relate to medical practice and privilege, and with an unselfish protection of the public from incompetent service; in a word, they embody those ideals which have stood the test of centuries. Upon these the Fellows are united. These are the ideals which each Fellow, single-handed, has endeavored to foster, and the expression of them today through the College comes as a sort of mass-consciousness of the whole body of Fellows. The splendid fact is that the Fellows have grasped in an instant the meaning of the College by a process of fusion and they have gladly made sacrifices for its success.

As one comes into wide acquaintance with the Fellows of the College and catches some fair notion of their earnestness, he sees the future of the organization not by means of logic. There is something more subtle and potent than argument. A determined optimism carries a momentum of its own. Without a logical process it seeks concrete expression; and, more than this, it really recreates circumstances through all shifts of weather or play of incident with a certainty not excelled by an utterly rational course. The Fellows of the College, in their widely scattered districts, fuse their consciousness of the organization with a splendid hope in their hearts to advance all that is important and valuable in the profession. This very attitude of mind is the first promise for the future of the College. It is a promise that admits of no defeat. It is a pledge of loyalty to medical patriotism which means loyalty to the public welfare exercised through intellectual sincerity and scientific accuracy. It means a safe-guard to the public, for it indicates where honest and adequate surgery may be found.

Reviews and Book Notices

"Diseases of the Skin"—By Henry H. Hazen, A. B., M. D., Professor of Dermatology in the Medical Department of Georgetown University; Professor of Dermatology in the Medical Department of Howard University; Sometimes Assistant in Dermatology in the John Hopkins University; Member of the American Medical Association; Two Hundred and Thirty-three Illustrations, Including Some Colored Plates. St. Louis. C. V. Mosby Co., 1915.

This is a new claimant for professional favor and an examination of the work induces us to believe that it will succeed in obtaining favor of all who consult it. It has been prepared upon a practical basis and is intended to give a working exposition of the common skin affections with which the practitioner meets up with in his everyday practice. By a reference to the pages of this book the novice can secure a ready grasp of the common diseases of the skin—their recognition, pathology and treatment. The illustrations are numerous and for the most part original, taken by the author from his own clinic. The publishers work has been done in the most up-to-date and attractive style. The book should prove a valuable addition to any modern physician's library.

"Pocket Formulary for the Treatment of Disease in Children"—By Ludwig Freyberger, J. P., M.D., Vienna, M. R. C. P., London, M. R. C. S., Eng.; Barrister at Law; Toxicologist and Pathologist, etc. Fourth Revised and Enlarged Edition; Adapted to the British Pharmacopoeia, with an Appendix of Poisons, their Symptoms and Treatment. New York, Rebman Co., Herald Square Bldg., 141-145 West 36th St

The former editions of this little book have been out of print for a long time and this, the fourth edition, has been prepared in response to many inquiries. The object of the work is to give to the busy practitioner and to students in concise and handy form all of the information which may

be required in the treatment of diseases of children by drugs. The condensed information is so arranged as to give at a glance the properties, use, therapeutics, incompatibles, dose, correction of their taste, examples of formulæ, their antagonists and antidotes. The ingenious arrangement by which this knowledge has been presented in such compact form is remarkable. It contributes a most valuable addition to the physicians collection of handy books of reference and should prove a useful companion to every physician.

"Speaking of Operations"—By Irvin S. Cobb, author of "Back Home," "Europe Revised," etc. Illustrations by Tony Sary, New York. Geo. H. Doran Co., 38 West 32d St. Price 50c.

We are in receipt of a copy of this delightful little book by one of the best known American humorists and we can conscientiously recommend it as a remedy for the blues where all other remedies of the materia medica fails. It is written in the best style of the well known writer and every line of the book will produce a laugh. While a good deal of burlesque as applied to the operations of modern surgery, it is sufficiently true to life to make it interesting as well as funny. We can safely urge upon surgeons the wisdom of using the book as one of his remedies for the fit of blues that nearly always envelope the unfortunate about to undergo an operation.

Publisher's Department

THE PROPHYLACTIC IMPORTANCE OF EFFECTIVE CORRECTION OF LIVER DISORDERS.

In connection with the modern tendency of medical practice to anticipate many human ills by instituting prophylactic treatment as soon as their possible occurrence is suspected—or, to perpetrate a bull, by “treating them before they begin”—it is especially interesting to note the growing recognition of the part played by the liver in the causation of many common affections. That the liver is an all important factor in the etiology of no small proportion of the metabolic disturbances, intestinal derangements and so-called auto-toxic disorders, is becoming more and more apparent as the physiologic functions of this great organ are given more careful attention and study. Moreover, as facts unfold, it is very evident not only that the importance of the liver has not been fully appreciated, but that prophylactic treatment to accomplish, with an degree of efficiency, the prevention of the ills referred to, must be directed primarily and principally to restoring and promoting the activity of the hepatic functions.

For many years the principal agents for attempting to restore the functional activity of the liver and regulate the portal circulation have been the hydragogue cathartics. In certain conditions these have been serviceable and more or less effective, but in many others they have proven valueless and even harmful, because of the exhaustion and depression resulting from the incidental catharsis.

In any comprehensive or affective scheme of prophylaxis of the affections due to insufficient or perverted hepatic activity the great desideratum is, therefore, to correct the liver condition without producing catharsis or purgation. The

remedies that are able to meet this demand are very limited. In Chionia, however, the medical profession have a preparation of Chionanthus Virginica that can be relied upon to exert a prompt stimulating and corrective effect on the liver without setting up a severe and drastic action of the bowels. The possibilities of such a product must at once be apparent. Certainly clinical experience has demonstrated its therapeutic utility, for under its use the functions of the liver are promptly restored to the normal, with all that this essentially means on metabolic processes in general, the elimination of toxic wastes and the regulation of the bowels. The use of Chionia, therefore, through its potent influence on the liver affords a dependable means of preventing many ills that all too often lead to serious and prolonged invalidism.

RESTORING THE PHYSIOLOGIC ACTIVITY OF THE BOWELS.

There are scores of drugs listed in the *materia medicas* and *pharmacopœias* which have some direct or indirect action on the bowels. They exert their influence in various ways—mechanically, physiologically and medicinally—and all have more or less merit—as their use and recommendation go to indicate.

It should be remembered, however, that catharsis and purgation are properly never anything but emergency measures—to be used only “on the spur of the moment” when quick eliminative action is needed; as a consequence of which cathartic and purgative drugs have no place in the routine or systematic treatment of constipation. Gentle stimulation of the bowel, on the other hand, by means of mild but effective *laxatives* offers the more rational means of treating bowel inactivity, the commonest of the human ills, and should always be called upon when permanent benefits are sought. The effects of such measures will be prompt and decided, without pain, griping or distress of any kind, and since they are brought about by proper stimulation of phys-

iological processes, they are naturally more prolonged and persistent.

Remedies that can accomplish such results are few and far between. Prunoids is one of the best of them and is gentle but thoroughly satisfactory action in all forms of constipation, stasis and even intestinal atony, through its influence not only on peristalsis, but also on secretory activity, have made it the remedy of choice for this class of cases by thousands of physicians in all parts of the world. An opportunity to test its value will be given to all physicians who address the Sultan Drug Co., St. Louis, Mo.

NEURASTHENIA.

The group of nervous ills which make up the clinical picture of neurasthenia, often call for the administration of the bromides. Too great care, however, can not be used in selecting the preparation to be used, but the physician who employs Peacock's Bromides may rest assured that he is using not only a sedative—and anti-spasmodic—of maximum efficiency but one that is so pure and free from objectionable action, even when administered over long periods, that maximum benefits may confidently be expected. One to two teaspoonfuls in water every two, three or four hours, as required, may be relied upon to accomplish the results desired.

INTESTINAL ELIMINATION.

To accomplish intestinal elimination there is no remedy more promptly effective than Prunoids. This is attained, not only with surprising thoroughness, but the activity of both the secretory and muscular function of the intestinal canal is restored with gratifying permanency. Prunoids, moreover, has the especial advantage that it does its work without any of the griping or reactionary constipation com-

mon to other cathartic measures. One to three at bedtime can be depended upon to move the bowels without exciting excessive peristalsis.

The usefulness of good hypophosphites in pulmonary and strumous affections is generally agreed upon by the profession. We commend to the notice of our readers the advertisement in this issue. "*Robinson's Hypophosphites*" is an elegant and uniformly active preparation; the presence of quinine, strychnine, iron etc., adding highly to the tonic value.

CORYZA—ACUTE NASAL CATARRH.

This condition is manifested by a local congestion of the nasal mucous membrane, with an infiltration of serum into the tissues and later an exudation on the part of the mucous membrane.

The local treatment calls for a remedy capable of relieving the engorgement by exosmosis, which can never be achieved by the use of acid or astringent preparations.

The use of Glyco-Thymoline in these cases purges the mucous membrane, relieving the congestion, and then by stimulating the local capillary circulation to renewed activity prevents a re-engorgement.

INTEROL.

The necessity for a thorough knowledge of the action of any therapeutic agent, before one can secure from it satisfactory results, is very strongly emphasized in the case of mineral oil.

It is surprising sometimes to note the erroneous ideas and impressions that are held by both physicians and patients regarding it. One finds it to be often used as if it were a

laxative or even cathartic agent. One hears of its being used to "clean out the bowel" and the complaint often made that mineral oil is too slow to act, or that doctor or patient can not afford to wait for its action, shows how little its actual *modus operandi* is appreciated.

Mineral oil is a lubricant and nothing else, that is, if it be of proper purity to be put into an intestinal canal. Not every oil is "safe", i. e., unless hyper-refined (which most oils are not) there may remain sulphur compounds or lighter hydrocarbons, which cause unpleasant symptoms, such as nausea, eructations and flatulence—or do serious harm in the way of irritating the kidneys.

Mineral oil acts mechanically *not* medicinally.

Hence its effects are slow to appear, especially in cases where lubrication is most needed. Unless the oil be of the correct degree of body, it does not admix with the content of the bowel, runs through the canal and causes "leakage."

Too much oil is just as bad as too little—and the quantity required in the individual case can not be gauged in one general plan. That is to say, there is no such thing as a fixed dose. Nor should it be given by "rule o' thumb." The individual dose must be determined and then the dose adjusted to the needs of the individual case. After all, mineral oil should be used only to restore normal action to train the bowels to act, and its discontinuance should always be kept in mind and sought for after it has done its work.

To discriminating physicians who take nothing for granted, investigation will show that for therapeutic use there is but one ideal preparation of mineral oil—and that is Interol.

NASHVILLE JOURNAL

— OF —

MEDICINE AND SURGERY

CHARLES S. BRIGGS, A.M., M.D., Editor.
W. T. BRIGGS, B.A., M.D., Associate Editor.

Vol. CX.

FEBRUARY, 1916.

No. 2

Original Communications

PERIODIC DRINKING A FORM OF CONVULSIONS.

BY T. D. CROTHERS, M.D.,
Hartford, Conn.

In every section of the country there are persons who use alcohol to great excess for a brief time, then become abstinent and remain so for a longer or shorter period. In popular language these are called "sprees" or "nerve storms." Literally, men and women in all walks and conditions of life find in alcohol a nepenthe and relief from strains and drains, or conditions of unrest and exhaustion, and drink to stupor and unconsciousness. Now, why this is so is unknown. Theories, traditions and explanations fail to give the real reason.

The sentiment that such occasions are moral lapses, the coming to the surface of the cave man instincts, the possession of the evil spirit and so on, are considered in many circles as the actual reasons up to the present.

Quacks, with their pretensions and dogmatism occupy this field and claim results to sustain their theories, yet today there is no accurate data or facts that will explain satisfac-

torily these sudden obsessions and nerve explosions which cause so much suffering and loss in almost every community of the country.

Scientific observation and experience indicate that these attacks resemble epilepsy and are veritable "nerve storms," coming on suddenly and then recurring after an interval of sobriety and good living. Often the "sprees" are preceded by derangements of the stomach, exhaustion, overexcitement, nervousness, and mental disturbance. Anxiety and fears causing sleeplessness very often bring on conditions of debility that are relieved most readily by some form of alcohol, and then comes an excessive use, up to stupor, and this continues for several days.

In high business circles these "sprees" are very serious breaks and cause intense regrets and remorse. Most persons of this class are very anxious to recover permanently, and do everything in their power to prevent relapse. If these "sprees" recur at regular intervals, they should be anticipated and active means and measures used to avert them. Select a physician of good judgment and experience, and have him study the symptoms which precede these attacks. He then has some basis on which to give medicines and suggest changes that will break up the onset of the drink craze. Thus, in one instance, a man by taking active purgation, Turkish baths, and a restricted diet, remaining in bed for a day or two, passes over the period when he would usually drink, and goes on many months free.

In another instance, a professional man stops all work and goes off to an institution, where he receives baths, electricity, tonics, and a change of thought and occupation for a week or so, then returns fully restored. Other examples are of persons who recognize the symptoms that usually precede their drink "spree," and go away to the woods hunting and fishing, or go down to the seashore and bathe freely, or turn their attention to some other work, or go visiting in out-of-the-way places; anything to divert the energies and change the conditions of living and thinking. When the storm is

averted a few times, the drink craze seems to die out, and the patient may be said to be cured.

In institutions managed by scientific men there is an increasing number of persons who come for advice, particularly how to escape these attacks that are sure to occur unless some active measures are used. Thus a prominent judge adjourns his court and goes under the care of a doctor for a few days, literally to avert a drink "spree," which is certain to break out, although concealed from his friends. He returns and is able to carry on his work as usual. Business men occupying positions of great responsibility often appear and take what is called "treatment," which literally means some remedies and measures that will break up the intense craze for the narcotism of alcohol, which comes over them like a storm and is not satisfied until it is fully gratified.

Many drug takers have become so by the use of opium and morphia to break up the alcoholic craze, or perhaps given by some thoughtless physician, or perhaps they have taken some quack drug or proprietary medicine containing morphia, and the end is a worse condition than that from which they sought to escape.

Every periodic drinker ought to realize that he needs medical counsel and advice as urgently as any fever case, or even tuberculosis. He should select some medical man and make him a confidant, and the problem of how to avert the drink storm can then be solved along rational lines, and many poor victims can be permanently restored. Quack cures and advertised specifics are to be shunned. The fact that they are patronized at all shows a demand for help, which the quack is ever ready to supply with all sorts of guarantees, but in reality these leave the victim weaker and more incurable than he was before.

Scientific experience has shown the curability of these disorders, and it seems foolish and criminal for intelligent men or women to break down at intervals in alcoholic sprees"

when they could positively recover by proper means and measures.

This is along the line of scientific prevention, and the new work done here by experts is as startling as the discovery of new germs, although concealed and not heralded in the papers. There are no secret drugs or special remedies that will apply to everyone. It is the scientific use of means adapted to each individual case and administered by wise judgment and skill. Whenever the person is anxious and willing to break off these terrible drink crazes and become free again he must set about it in a rational, businesslike way, and remember that no treatment can be of any avail unless it comes from a thorough study of the man and his conditions.

Each case differs from every other, and the talk of cures in a certain brief time, for a certain commercial sum, is entirely out of the range of scientific work. This fact applies to a great many other disabilities in life. The subterfuge of going to Europe and claiming to be overworked, and securing relief from this means, or going away to some watering place, and hoping to obtain relief in some unusual and extraordinary way, should be put aside, and the person should treat himself and his condition the same as he treats property, using only the best skill and the most rational measures that can be devised.

Among the patrons of almost every medical man are men and women who have literal "drink storms." The men will frequently go away, use alcohol for three or four days, or longer, then come home suffering from gastritis and various other disorders, and the physician will be called. The man is sure to recover under any treatment, for the storm is over, and nature will take care of the injuries done.

In the remorseful stage the family may become excited and the doctor will reflect this excitement in some way, and send him off to some advertised cure or sanatorium with the dominant idea that he is going to receive some special cure or some drug treatment that will be permanent. He takes

what is given him, and in a few weeks returns home, enthused with the fact that he has received radical treatment.

The enthusiasm gradually dies away, and by and by the drink storm breaks out again, this time more secretive than ever, because of his wounded pride and disappointment which he knows will make his friends suffer, and lower their respect for him. Later he comes to the doctor again and recovers, and the doctor foolishly assumes that there is no cure or else he becomes enthused with some drug combination, and believes that this is responsible for the restoration of the patient. All this is a perfect farce. The patient recovers with or without treatment and the condition he suffers from is largely unknown.

The question of why these storms gather and break must be settled first. These patients must be studied, and these storms anticipated and provided for, either by home treatment or hospital treatment away from home.

The patient is often aware of the on-coming storm by nervousness, excitement, unrest, and his friends often recognize his emotional perturbations and changes of conduct. This is the period for active treatment. Thus in one instance, a man previously good-natured, kindly and affectionate, will suddenly, without any special cause, begin to scold and accuse his friends of taking advantage of him. He will show suspicion and do most unusual things. In a day or so he is found intoxicated. This mental irritation was the actual symptom of the drink storm, and here is where the medical man would have been of inestimable value. Often a purge, a Turkish bath, or a change of scenes or surroundings might have averted this storm, but nothing is done. His intimate family and associates know that these are symptoms precede drink attack, and yet nothing is done to avert it. No medical advice or counsel is sought for, until the attack has become fully developed.

A reputable authority says that over half of all the persons who go to cures and sanitoriums for the drink habit would get well at home without any treatment; their dis-

order is self-limited. In my experience at least 75 per cent of these periodic drinkers could be cured and restored again to health by the proper treatment, which anticipates the drink craze.

The most successful cases of restoration I have seen have been along this line, where the patients and their families were alert to anticipate the "storm" and use every means of prevention. Thus a young man who accidentally comes home with an alcoholic breath should be the subject of the most intense study and active treatment to prevent him from going any farther. His promises and explanations should never be taken literally. He should be made to understand that he is on the verge of a disaster, that unless stopped at the beginning will be destructive.

This is the new field which is not occupied and which promises the most positive results. Every physician can take up the study in his own circle and become a great power among his patrons and do more literal scientific work than when called on to treat the case after the storm has begun.

If physicians are not confident of their own capacity to treat these cases, send them to someone who can, but do this early, in the beginning, and not wait until the storm has broken out and its natural termination is in sight. It is better to keep them home and give them sulphate of magnesia every hour and any other treatment that appeals, and get the credit of their recovery which irregulars revel in so sharply.

The three days' or three weeks' cures, by almost any kind of remedies, are farcical to the last degree, especially in periodic cases. In the steady drinkers, the results are more satisfactory, as to permanence, but in the periodic cases the boasted 99 per cent cures is real. They all would get well anyway, but the fact that 99 per cent relapse in the future, sooner or later, is not spoken of. This is much more accurate than the former statement.

In my experience, covering many years in the care of a large number of people, if the person can be trained to an-

ticipate these attacks, and his friends can help him to overcome them, permanent cures will be the rule and not the exception.

It is only along this road that this terrible disorder can be effectually checked, and many of the brightest intellects in business and professional circles can be restored again to a life of great usefulness. When those facts are understood and put into practice we shall have less tragedies and disasters, and less poor victims down at the terminal stages of the almshouse and prison.

Selected Articles

ENTEROPTOSIS.

BY F. ROBBINS, M.D.,
New York.

General Remarks—Enteroptosis means a descent of otherwise healthy abdominal organs below their normal level, in the direction of gravity, and is characterized by abnormal mobility of the displaced viscera. The displacement may concern the bowel, the stomach, the liver, the spleen, and the kidney. The condition is named after Glenard, who regarded it as extremely common, believing it to be present in ninety or more per cent of all persons who seek professional advice.

The *cause* of enteroptosis, aside from congenital factors, is referable to a lack of tonus of the anterior abdominal wall. This relaxation affects the abdominal muscles, so that the recti become insufficient and unable to resist the intraabdominal pressure. The onset of enteroptosis is favored by traumatism and violent exercise. Pregnancy, and improper clothing, such as tight corsets, are important etiological factors, and enteroptosis is accordingly more frequent in women than in men. Symptoms on the part of the uterus are often relieved by the treatment of enteroptosis. Rational methods of treatment are based upon the recognition of the etiological factor of the disease, which is relaxation with atony. Enteroptosis gives rise to a train of rather indefinite symptoms, indigestion with abdominal discomfort, increased peristalsis and constipation, nervousness, mental depression, and vertigo.

Radiography—The extreme frequency of gastropnoeses of all degrees, in women as well as in men, is best revealed by

x-ray examination, which also explains the reason why conservative therapeutic measures fail in a certain number of the cases, on account of adhesions fixing the displaced stomach at various points of the abdominal cavity. Radiography illustrates the inadequacy, futility, or actual harmfulness of most of the customary procedures for the correction of the gastric displacement. A revolution of the pathology of the large intestine has been brought about by the use of the x-rays, which also afford valuable information on the subject of enteroptosis. However, the opinions of specialists are still at variance as to the interpretation of the findings. In enteroptosis, the last coils of small intestine are no longer in the vicinity of the cecum, but they have dropped down into the small pelvis. The transverse colon is usually lowered, and the hepatic flexure is often displaced downwards, while the sigmoid flexure sags more frequently than any other segment of the large intestine. The descent of the large bowel (coloptosis) is of even greater clinical significance than a sagging stomach, whereas ptosis of the small intestine is relative unimportant.

Recent Statements of Prominent Clinicians and Operators. The most recent important contributions to the subject of enteroptosis (splachnoptosis) are those of Thorkild Rovsing and of Grechen. The monograph of the former, entitled, *Bastro-Coloptosis*, contains chapters devoted to the discussion of the pathological significance, which in the author's opinion is frequently underestimated, the *clinical pictures* of the disease, its diagnosis and treatment; with a report of three hundred cases treated by gastropexy. Rovsing emphasizes the numerous confusions of gastropexy with other diseases of the stomach, such as gastric ulcer or cancer, and the frequency of mistaken treatment. Inefficient or harmful gastroenterostomies for "suspected ulcer," as well as most useless appendectomies and oophorectomies, can be avoided by the proper recognition of enteroptosis, and its cure through the performance of an operation (gastropexy), or the application of a bandage, according to indi-

vidual needs in a given case. Proper fixation compensates for the lost function of the suspensory ligaments of the stomach, and the resulting loss of normal support. The power of evacuation of the stomach is improved, as the indirect effect of the operation. Gastropexy is absolutely indicated in all those cases of gastrocoloptosis in which the patients are semi-invalids, and more or less unfit for work, on account of their gastrointestinal disturbance, in spite of systematic medicinal measures and the application of an abdominal supporting bandage. In order to be efficient in any case of enteroptosis, the bandage or binder must meet the following conditions: The pressure must act widely, on the hypogastrium alone, by means of a large strong pad or pledget; the pressure must be uninterrupted and extensive; the bandage must be so constructed that the patient can put it on in the morning, before getting up, while the abdominal organs are still in their proper place.

Enteroptosis is considered by some authors as a phenomenon of degeneration, one of many symptoms of a universal asthenia; while others believe that the displacement of the organs as such is the actual cause of most of the distressing symptoms and disturbances. Rovsing points out that there is a tendency among physicians as well as in the laity, to regard as hysterics or malingerers many unfortunate sufferers from enteroptosis, who, on examination were found to be free from organic or functional disease of the digestive system. In those cases gastropexy, in his experience, has a most beneficial effect, and requires to be supplemented by gastroenterostomy, or more rarely resection, only when the condition is complicated by duodenal ulcer, pyloric stenosis, or hourglass stomach.

Grechen considers *gastroptosis* as a congenital displacement of the stomach. Well-marked cases were observed by him in children less than five years of age. The displacement is always associated with anomalies of microscopical structure, congenital weakness of the muscular layer, insufficient secretion, general relaxation, and a tendency to dis-

ease. The muscular tonus of a displaced stomach is diminished or altogether lost, and enormous quantities of undigested, half decomposed food will occasionally collect, with disastrous results, in a sluggish dilated stomach. The diagnosis of gastric dilatation—a result of gastropptosis—is based essentially upon the history, the long-standing digestive disturbances, symptoms of gastric ulcer, anorexia, obstipation, general weakness, and nervous irritability. The most favorable cases of gastropptosis are those in which the upper pole of the stomach is not much lower than the umbilicus. In very advanced cases, the displaced stomach rests upon the pubic ramus, filling most of the large pelvis. Midway cases are those in which the lowest point lies between the umbilicus and an imaginary horizontal line drawn through the two iliac crests.

Gastropptosis and *enteropptosis*, from the therapeutic point of view, are a single closely associated disease. The descent of the stomach is invariably accompanied by intestinal disturbances, which in a number of cases govern the clinical picture. The duodenal digestion is necessarily impaired, as the direct consequence of the pathological processes in the stomach and at the pylorus. Furthermore, it results from the congenital etiology that the deficiency is never limited to a single segment of the digestive apparatus, but that the entire system is involved in the degeneration. Ptosis of the sigmoid flexure of the colon is the most common type of displacement of the large bowel. On the other hand, the duodenum is not apt to leave its normal position, although a vertical displacement of its first segment has been observed as a sequel of gastropptosis. The jejunum and ileum are so freely movable under normal conditions that enteropptosis here plays a substitute part. Conditions differ in the large intestine, where the sigmoid flexure shows a predisposition to displacement. Motor insufficiency is the principal factor, and this is maintained and aggravated by congenital (more rarely, acquired) anomalies of position. The enteropptosis is not primarily due to abnormal mechanical pressure of a

dilated stomach upon the transverse colon, but is in all probability dependent upon congenital developmental variations.

Treatment.—In a general way, surgical treatment of gastroptosis is reserved for the gravest cases, whereas all other patients are treated only with dietetic and internal measures. Although these can hardly accomplish a cure, the disturbances may be efficiently controlled and the nutrition greatly improved, so that operative interference no longer enters into consideration. A purely vegetable diet, including egg-yolks, is usually recommended, with restriction of all sorts of fluids, not excepting milk, unless this be incorporated in the solid dishes. One quarter to one-third of a liter is sufficient beverage for the day. In this way, the dilatation of the gastric wall and irritation of the mucosa may be prevented, or at least essentially diminished, most of the digestive work being done by the salivary glands, the pancreas, the bile, and the enteric juice. Routine washing of the stomach in these cases is now entirely abandoned, as the few remnants of active gastric juice are swept away by the irrigations. Regulation of the bowels is of the greatest importance in all cases of displacement of the stomach alone or together with the intestine.

The *treatment* of enteroptosis is based upon the symptoms and must meet the double indication of disinfecting the intestinal contents and regularly emptying the bowel. Relief is often secured by well-adjusted supporting bandages, properly selected exercises (for strengthening the abdominal coverings), cold baths, electricity, and massage. Surgery, in form of the application of an anastomosis between the lowest point of the stomach and the highest jejunal coil, is regarded by Grechen as the simplest and most reliable radical treatment in severe cases of chronic enteroptosis. This operation has highly beneficial results, and owing to the improved modern technique, its mortality (10 per cent.) would be still lower, if surgical intervention were not often too long delayed. Other procedures, such as pylorotomy, or plastic dilatation of the pylorus, are either inefficient or too

dangerous. The indications for surgical interference are restricted to the advanced cases of enteroptosis, unrelieved by symptomatic measures, in which the dilated paralyzed stomach and displaced intestines have led to severe digestive disturbances, notably vomiting, loss of weight and nervous symptoms.

The importance of careful individualism in these cases is emphasized by Ransohoff, who states that even desperate cases of enteroptosis with grave neurasthenic symptoms, are often permanently cured by operation; which should not be too long delayed, after all other measures have been found inefficient. However, only those cases of gastropotosis should be operated upon in which a serious functional disturbance, amenable to surgical relief, is present. Goldthwait emphasizes the importance in these cases of "teamwork" between the physician, the surgeon and the orthopedist.

A good description of enteroptosis and splanchnoptosis is given by S. Goodwin Gant, who states that this condition may be general (Glenard's disease), when the liver, kidneys, spleen, stomach and intestines descend below their normal level; or localized, when the displacement concerns but a single organ or section of an organ, as for instance when there is a sagging of some particular part of the large intestine. Enteroptosis is sometimes due to a separation of the recti muscles, and ingenious procedures have been devised for the repair of the abdominal wall. The first treatment recommended for the support of displaced organs was Glenard's elastic hypogastric belt. This has been more or less successfully imitated by many mechanical devices, in form of belts, trusses, stocks, girdles, binders, pressure-pads or pledgets, plaster jackets, corsets and roller bandages. Gant points out that these supports should conform to the lines of the body while breathing, walking and defecating, but must also be sufficiently firm to retain the displaced organs in position, at all times. A support of this kind must be worn for weeks or months. Systematic deep breathing, massage, and mechanical vibration, as well as electricity and

hydrotherapy, are useful adjuvants in the treatment of enteroptosis. After the failure of non-operative measures, surgical procedures are indicated for the restoration of the displaced organs and their fixation in, or as near their normal position as possible. The fixation of the displaced colon to the abdominal wall (colopexy and sigmoidopexy) have proved successful measures in the treatment of enteroptosis in the experience of Gant, who has devised several modifications of the operative technique, especially for the management of sagging portions of the bowel after it has been fixed to the abdominal wall. His experience with colopexy which he does not regard as a dangerous operation, has convinced him that persons suffering from obstipation and other troublesome manifestations of enteroptosis, who fail to obtain relief from nonsurgical measures, can in many instances be permanently cured by this procedure.

Based on his assumption of congenital relaxation of all tissues, in enteroptosis, Zweig is not in favor of surgery in these cases. Although the stomach, the colon, or the kidney, as the case may be, can be anchored in place, this will not alter the clinical picture of visceral neurosis, the anatomical dislocation of the organs being relatively unimportant as compared to the symptoms on the part of the digestive and nervous system. Rational treatment aims at restoring the mechanical equilibrium in the abdominal cavity, thus counteracting the further descent of the viscera; and also at relieving the associated disturbance of the digestive nerve-system.

Gastroptosis being in the great majority of the cases the more or less remote result of gastric atony (Gazaignaire), the displacement may be relieved by dietetic measures, after the normal shape and position of the stomach have been re-established, and the kink in the pyloroduodenal canal has been straightened out. Belts, bandages, and other abdominal supports aim at this result. The effects obtained depend not so much upon the displacement itself, as upon the configuration of the abdominal walls. When the patient's

abdomen is relaxed and hangs down, the results are often excellent, whereas in the case of a flat and caved-in abdomen, treatment of this kind is apt to prove unsatisfactory. A stomach not bound down by adhesions is usually well held up by a non-elastic belt, with a pneumatic fixture. The elevated organ tends to resume its normal shape, and promptly responds to the beneficial effects of restitution and dietetic regime. The advantages of this method of treatment consist in the often immediate relief of the painful symptoms; the relatively rapid gain in weight; and the definite return of the stomach to its normal position, the required time depending upon the degree of gastric atony present.

The existence of gastroptosis can not be surmised on the basis of the subjective symptoms complained of by the patient, for in the great majority of the cases, the symptoms do not differ markedly from those of atony of the stomach, or hypasthenic dyspepsia. Gastroptosis finds its clinical expression in the disturbance of the rhythmic evacuation of the stomach. This delayed emptying of the organ is dependent upon the two factors of motor insufficiency (gastric atony), and obstruction of the digestive passage through the resulting curvature in the pyloroduodenal canal. The displacement of the stomach is revealed through the routine examination of the gastric boundaries, and the demonstration of the lowered inferior margin and lesser curvature. Simple percussion will not suffice to show the descent of the lesser curvature, when ptosis and atony are associated with dilatation, as is frequently the case.

Based upon the observation that in certain cases of enteroptosis the disturbances are not so marked when the bowel is full, as the result of several days' constipation, Arnoldi recommends an abdominal support which is held tightly in place by a roller bandage directly above the symphysis. This bandage does not aim at retaining the stomach and the bowel, but at preventing the descent of the upper abdominal organs, through the firm fixation of the lower organs. Lerch, who points out that the intra-abdominal pressure must be

restored in these cases, has devised a suitable whale-boned cloth bandage, which restores the pendulous abdomen to the normal, or nearly so. A natural belt, strong enough to resist the intra-abdominal pressure, can sometimes be provided by surgical interference, after medical and orthopedic measures have been exhausted. Resection of a portion of the relaxed abdominal coverings serves to tighten the wall, and may be sufficient to keep in place, without anchorage, the dislocated organ or organs. (Lamyot de la Haye.)

Displacements of the *liver* and the *spleen*, hepatoptosis and splenoptosis, are observed only in cases of very marked tissue-relaxation, congenital or acquired. The condition is usually noted in those cases in which a pendulous abdomen, with all its sequelæ, develops as the result of acquired mechanical factors (such as difficult childbirth, or surgical extirpation of very large abdominal tumors). The same causes may also lead to a displacement of the *kidney*, known as nephroptosis. The symptoms are usually vague, and partly referable to nervous irritability or weakness. A displaced pelvic kidney is usually congenital, and may never give rise to disturbances of any kind, but cases have been recorded in which it has acted as a serious obstacle to childbirth. The symptoms of renal displacement consist in abdominal pains, digestive disturbances, and nervous affections of variable degree. No operative interference is called for, unless the symptoms are of considerable severity. Removal of diseased female genital organs leads in many cases to subsidence of the renal symptoms. (Plummer.) The indications for operative interference with the kidney itself must be based upon the anatomical degree of the displacement, the gravity of the condition, especially strangulation, and the presence of complications, such as intermittent hydro-nephrosis, pyelonephritis and nephritis. The operation of choice for pelvic and otherwise displaced kidneys is dislocation and reimplantation in a place where the organ will not be a mechanical hindrance. Provided the necessary pre-

cautions are observed, the anchorage of the kidney is usually followed by very satisfactory permanent results.

A complete discussion of enteroptosis should include the mention of displacements of the esophagus and of the heart (cardioptosis), although these ptoses are not common. Pto-sis of the female genital organs (prolapse) is a condition of itself, and is not usually included under the general heading of enteroptosis.—*Medical Record*.

Extracts from Home and Foreign Journals

SURGICAL

TRANSPLANTATION OF UNDESCENDED TESTICLE. . .

P. Turner records two cases of double undescended testicle treated by transplantation to the opposite sides of the scrotum through an opening in the scrotal septum. He claims the following advantages for this procedure: (1) The testicle is transplanted to the well-developed side of the scrotum, where there is much better accommodation for it than on the ill-developed side. (2) It is usually possible to effect the transplantation without dividing the vessels of the cord. (3) Sutures to fix the testicle in its new position are unnecessary, and the organ itself is not damaged during the operation. (4) When the testicle has been drawn through the septum in the scrotum the small opening contracts, and hence the weight of the scrotum acting through the septum exerts a continuous slight force tending to keep the testicle in its new position. (5) The operation is carried out without dividing the external abdominal ring and with the least possible damage to normal tissues.—*Pediatrics*.

CARCINOMA OF THE MALE BREAST.

As is generally understood, this neoplasm has but slight connection with typical cancer of the female breast, being of very exceptional occurrence despite the fact that it occurs in a superfluous structure. It bears some resemblance to the scirrhus or atrophic form of cancer of the female breast in that it occurs in senile subjects, grows slowly, attains but limited size, and tends from the first to involve the lymph node packet in the neighboring axilla. That so rare

yet typical a growth can occur in a highly atypical form is shown by a case described by Husse in the *Muenchener medizinische Wochenschrift* of November 9. The man was but 43 years old, a consumptive, and had besides a mitral lesion of unknown duration and origin. Two months before consultation a small tumor was noted in the left breast. This grew with amazing rapidity and both macroscopically and microscopically appeared to be a medullary cancer. The lymph nodes in the axilla already formed a paquet the size of an English walnut. The patient submitted to a very radical type of removal without ill consequence. The case is singular in many respects. Florid cancer in any location is not prone to attack a man with health impaired by cardio-pulmonic disease, and it is of course a mystery why it should have selected so rare a site. Since it was the left lung alone which was involved, as well as the left heart, one is inclined to wonder whether frequent percussion close by or over the cancer area could have by a succession of petty traumatisms furnished the necessary determining factor. The author is entirely silent on this possibility, perhaps because it was difficult to secure a good personal history.—*Medical Record*.

THE PREVENTION OF PERITONEAL ADHESIONS.

Pribram (*Archiv für klinische Chirurgie*, Bd. 105, Heft 2, 1914) reports upon experiments carried out in Payr's clinic with a view to prevention of peritoneal adhesions. The material used consisted of the vitreous humor of the eyes of sucking calves obtained under aseptic precautions at slaughter houses. The experimental animals were dogs, cats and rabbits. It was first shown that the vitreous humor did not produce anaphylaxis, fever, or any other disturbance, and that its introduction in large quantities into the peritoneal cavity was well borne by the animals. The experimental animal was etherized, the hair shaved, and the skin washed with ether, alcohol, and tincture of iodine. A median-line incision was made, and at once the peritoneum

sutured with continuous silk suture, the muscle and fascia with catgut and the skin with silk. The line of sutures was painted with tincture of iodine and an aseptic dressing applied. Then the vitreous was injected into the peritoneal cavity. Control animals were used in each instance. The effect of the vitreous is to render the peritoneum very slippery and to gradually spread over the entire surface. Primary adhesion is either entirely prevented or at least very much reduced, as shown by comparison with control animals. It will not prevent adhesions as a result of infection or wide-spread chemical action.—*The Therapeutic Gazette*.

ROENTGEN-RAY TREATMENT OF EXOPHTHALMIC GOITRE.

In the *Medical Record* of September 4, 1915, Simpson reaches conclusions as follows as to the use of the x-rays in Graves's disease:

1. Many cases of exophthalmic goitre are associated with enlarged thymus glands, and this association often causes serious postoperative symptoms and even death.

2. While such an association will seriously complicate and prolong a surgical operation, it offers no such added difficulties for the Roentgen therapist.

3. Not only such ductless glands as the ovaries and testicles, but also the enlarged thyroid and thymus glands as well are very sensitive and may be atrophied by the Roentgen ray.

4. This theory has been amply proved by laboratory experiments and clinical results in many cases of hyperactivity of the thyroid gland—exophthalmic goitre.

5. If these cases of status lymphaticus and exophthalmic goitre will give the Roentgen ray a fair and impartial trial the majority of them will be relieved of all troublesome symptoms and make unnecessary a disfiguring, dangerous, and often futile operation.

6. The above findings are not entirely the writer's own hastily formed ideas, but include the results of several hundred cases of exophthalmic goitres that have been successfully treated by the Roentgen ray, the literature of which is open to all who may care to investigate it.—*The Therapeutic Gazette*.

WARM ANESTHETIC VAPORS.

Francis B. Shipway points out the defects attendant upon the administration of cold ether by the open method and describes an apparatus by which he administers warm ether vapor. The superiority in this method lies in the fact that there is greater ease in breathing; there is a free airway and complete oxygenation; the loss of body heat is less and hence there is less shock; the patients appear to recover a little more quickly, and it also seems that lung complications will be a little less frequent with this method. There is no need to warm the ether artificially in very warm weather above the room temperature; in cold weather 85° to 90° F. will give good results. The higher level is better for patients who are feeble or shocked, or for operations which involve much exposure, loss of heat, or much bleeding.—*Medical Record*.

PRESSURE SIGN OF PERITONEAL IRRITATION.

The so-called Blumberg's sign is the pain in the region of the appendix following rapid removal of the hand after it has been applied to the spot to induce pressure. Nikolaieff denies that it is specific for appendicitis. He has been using this sign long before Blumberg, and found it not only in appendicitis, but in every case of peritoneal irritation, whatever its cause. Thus he found it in perforative peritonitis, gastric or duodenal ulcer, in cholecystitis, typhoid ulcers, etc. He usually examines each of the four quadrants of the

abdomen. He gives the history of five out of 340 cases in which he studied this sign. It is especially pronounced during the first twenty-four or forty-eight hours, being thus one of the earliest and therefore most valuable signs of acute involvement of the peritoneum by any of the above mentioned diseases. In chronic peritonitis, for instance tuberculous peritonitis, it is absent.—*The Journal of the American Med. Assn.*

MEDICAL

The whooping cough clinic established in New York by the municipal health department in August, 1914, has made a report of its first year of work, which is summarized in the November *Monthly Bulletin* of the department of health. The total number of patients treated was 1,397, and over 12,000 treatments were given. The plan of treatment has finally resolved itself into a treatment by a vaccine, supplemented by an antipyretic mixture and cod liver oil emulsion, the latter to be used in cases in which there is considerable bronchitis. The vaccine have been prepared in the laboratory of the board of health, and under the use of this agent the paroxysmal stage of the disease has been limited on an average to a duration of about three weeks. Prophylactic immunization has been practiced in forty-five cases with no disease among these children. Four out of eleven exposed patients treated with the antipyretic alone as controls contracted the whoop, and eight out of thirty-six persons not treated became infected. The method of treatment consists in giving three or four subcutaneous injections, on every other day, and following this by the antipyretic mixture for a period of three or four days. The whoop usually disappears between the third and fourth injections; if it does not, another course may be given. The initial dose for children less than 1 year of age is 250 million organisms, doubled every second day. Children over 1 year old receive an in-

itial dose of 500 million and adults 1 billion. The prophylactic dose consists of three injections of 500, 1,000 and 2,000 millions at three-day intervals. It is said that the establishment of the whooping cough clinic is warranted, no matter what method of treatment is employed, and several other clinics will probably be established. Many private physicians have asked consultation with the physician in charge of the whooping cough clinic.—*The Journal of the American Medical Asso.*

THE TREATMENT OF ARTHRITIS.

Seaborn in the *Canadian Practitioner and Review* for Sept., 1915, believes that it is now well recognized that the focus of chronic suppuration must be removed. The tonsils, teeth, nasal fossæ, appendix, or prostate often contain this focus. In many cases, after most diligent search has been made to locate the focus and when the serum from the joint is negative, we may still find the offending organism by removing under most strict asepsis the lymphatic gland nearest to the joint, macerating it, and making a culture of the contained organisms. Then vaccines may be prepared and that used which gives the most characteristic reaction.

In two cases in which this was done the improvement was very great. In both staphylococcic and streptococcic vaccine had been used, and in one gonococcic vaccine as well.

The improvement after autogenous vaccines thus procured was very great.—*The Therapeutic Gazette.*

TUBERCULIN THERAPY.

Henry L. Shively says there is a general agreement among sanatorium physicians that patients who receive tuberculin treatment lose their bacilli more readily than patients who do not, that a greater proportion are discharged arrested, a larger number are restored to working efficiency, and that after a period of years their cure is better maintained than

that of patients who have not had tuberculin. Besides these regular routine effects, which are gradually obtained over long periods of time, there are certain fortunate patients for whom tuberculin treatment is a real boost. The special field for tuberculin is that large group of patients with fairly good resistance, with little or no fever, stationary or slowly progressive, who are ineligible for or can not go to a sanatorium, or who have failed to obtain a cure or an arrest while at a sanatorium. The time has come when the tuberculin treatment may be applied in private practice without danger and to advantage, or at least every tuberculosis clinic should have its tuberculin class. It is well for the beginner to select one preparation of tuberculin, preferably one representing all the substances contained in the bacilli; the best for all purposes is probably the bacillen emulsion. Hitherto the technique of the administration of tuberculin has been invested with unnecessary difficulties. A blood count, the determination of the opsonic index, or a complement fixation test, is of little practical value in treating the patient. Much time may be lost in beginning with or continuing too long with excessively minute doses. It is probable that doses of one-tenth million or even a millionth of a milligram are practically inert.—*Medical Record*.

TREATMENT OF RENAL DISEASES.

Hirschfeld obtained far-reaching benefit in certain cases of contracting kidneys by a diet very low in protein—only 30 grams of absorbable albumin, to which he added 5 grains of sodium chloride. The diet was made up chiefly of vegetables, potatoes, rice, cream, sugar and fruit in large quantities. Under this regimen the polyuria sinks to $\frac{3}{4}$ liter in 24 hours and is usually alkaline or amphoteric. If still acid, alkalis should be administered as an alkaline reaction is a desideratum. As a rule a fall of blood pressure is noted after two weeks of this diet. Two hours daily of walking is also of the greatest benefit, because it shows up the nitro-

gen excretion and thereby spares the kidneys and reduces the albumin in the urine if this is present. The author evidently believes strongly in the anginal origin of many cases of nephritis. The use of sodium chloride in these cases appeared to be largely intended to determine the degree of intolerance to the substance as the patients are elsewhere stated to be on a salt poor diet, and the attempts to keep the urine alkaline seem to be with the view of warding off an acidosis. The article will be continued and doubtless somewhat random statements will be properly summed up.—*Medical Record*.

THE DOG AS A CARRIER OF DISEASE.

Of the diseases carried by dogs, the foot-and-mouth disease is probably of the greatest interest at this time. In this case the dog acts as a mechanical carrier of infection. The dog which runs across an infected farm easily may carry in the dirt on his feet the virus of this most contagious of animal diseases to other farms and thus spread the disease to the neighboring herds.

There are, however, many other maladies in the spread of which the dog takes an active part. "The Dog as a Carrier of Parasites and Disease" (1), rabies, hydatid, ringworm, favus, double-pored tapeworm, roundworm, and tongue-worm are often conveyed to human beings in this way. It occasionally happens also that the dog carries fleas and ticks around transmitting bubonic plague or the deadly spotted fever in this way.

Hydatid disease is caused by the presence in the liver, kidneys, brain, lungs, and other organs, of a bladder worm or larval tapeworm. A dog which is allowed to feed on carrion or the raw viscera of slaughtered animals may eat a bladder worm containing numerous tapeworm heads. These tapeworm heads develop into small segmented tapeworms in the intestines of the dog. The tapeworms in turn develop eggs which are passed out in the excrement of the dog, and

spread broadcast on grass and in drinking water where animals can eat them and thus become infected. The hog is particularly liable to this disease because of its rooting habits.

Of the external parasites which dogs may carry to animals, fleas and the various kinds of ticks are both troublesome and dangerous. The remedy is clear. The owner must keep his dog clean, not merely for the comfort and happiness of the dog, but to prevent it from becoming a carrier of disagreeable and dangerous vermin.

These reasonable measures, important to the stock farm, have a direct connection with the health of the family. Where ringworm or other skin diseases break out among the children, or the worm parasites develop, it is well to determine whether a dirty or uncared-for dog may not be carrying infection on his skin or his hair, or by conveying disease from carrion directly to the food and persons of his friends.
—*Pediatrics*.

DIRECT INJECTIONS INTO THE HEART IN DESPERATE CONDITIONS.

Szubinski relates three cases of intracardial injections, which were made to replace the ordinary intravenous injection in impending heart failure. A preparation of digitalis was used along with suprarenin. In addition intravenous and subcutaneous injections were made in the hope of maintaining the gain. The first of the soldiers treated had both legs shattered and had bled for two hours before transport from the field. There was no response to ordinary remedies. The pulse and respiration showed that death was imminent. The intracardiac injection caused a sudden briefly—two or three minutes long—after which the old picture reappeared. The second patient was badly shot up with protrusion of most of the intestine through four openings, and shot fractures. The intestines were hastily replaced and the openings sutured. The patient seemed hope-

lessly shocked. There was a rally after the intracardiac injection and the patient became restless and partly sat up. He survived ten hours under ordinary subcutaneous injections of caffeine and camphor with Murphy's rectal drip. In the third case was one of wound of the head. There was Cheyne-Stokes breathing. Strophanthin and suprarenin were injected. There was a brief rally with death in fifteen minutes. It is possible that now and then these injections will save life.—*Medical Record*.

OBSTETRICAL

MYOMETOMY FOLLOWED BY SEPSIS.

The second case was that of a woman thirty-five years of age who had had five children. She was admitted to the hospital for menorrhagia and metrorrhagia existing for four months. She had a child born nineteen months previous to admission to the hospital. Three years ago had had a vagino-plastic operation and amputation of the cervix. Vaginal examination disclosed genital hemorrhage, erosion of the new external os, fundus and body of uterus normal position, freely movable, and about the size of a two-months' pregnancy; right ovary normal, left not palpable, but no mass, not tender. There were two histories of this case, one giving a regular menstrual history and the other showing a postponed period which raised the question of ectopic. The abdomen was opened and we found large varicosities in the right broad ligament; uterus enlarged to size of two months' pregnancy; adnexa normal. I regret to say that I curetted this patient before opening the abdomen. I thought I would take out a wedge shaped piece from the fundus down to the utero-cervical junction, leaving endometrium. The raw surfaces were covered by separating the bladder as in a hysterotomy and the uterus was anteverted by suturing the anterior covering over the top of the new uterus. That night

the patient had a chill and the temperature arose to 103.8. The next morning she had another chill and the temperature went up to 105. Since then the temperature has gradually dropped and is now normal. The condition looked like a toxemia but it could occur from manipulation. The respiration and pulse corresponded to the temperature rise. The first blood count showed a white blood cell content of 24,000, the second count two days after the operation showed white blood cell count of 32,000. The pathological report said: endometrium hypertrophied and hemorrhagic; pronounced interstitial fibrotic endometritis; hypertrophy of musculature and sclerosis of vessels.—*Long Island Medical Journal*.

RESULTS OF THE MESOTHORIUM TREATMENT OF 100 CASES OF CANCER OF THE UTERUS.

Baisch has used radium and mesothorium on these growths since February, 1914, and has controlled 100 cases in this manner during a fifteen months interval. Clinically, three types of disease were treated, as follows: Completely inoperable, barely operable, readily operable. The latter class does not comprise beginning cases, such as might be accidentally stumbled upon. Of the inoperable 43 cases treated by radiation, but one may be termed cured; of the remainder, 20 have ended fatally, while 22 have not been improved. The cured case, isolated though it be, is a striking example of what mesothorium can do. In numerous other cases the remedy caused amelioration of symptoms, and delayed the outcome. Bleeding and fetor were checked and some of the women were able to return to their work. In general, it may be safely asserted that mesothorium (including radium) is the best known palliative. The second group of "not yet inoperables" was made up of 20 subjects who "stood on the borderline of operability." In 50 per cent of these cases recovery ensued, while 4 patients are dead and 6 are not improved. The conditions of recovery differ from those in which surgery is the treatment, as re-

currence after eighteen months of quiescence following mesothorium treatment is not likely to happen. There remain 37 cases of readily operable cancer in which mesothorium was the treatment. Of this number 28 are apparently cured, while there have been 5 deaths and 4 negative results.—*Medical Record*.

ON THE USE OF SCOPOLAMINE-MORPHINE IN LABOR.

Croom in the *Edinburgh Medical Journal* for August, 1915, reaches these conclusions:

No absolute routine treatment should be adopted.

Every case should be treated upon its own requirements.

The physician must be in constant attendance from the first dose, which should be administered when the pains become regular early in the second stage of labor.

The patient should be kept as quiet as possible.

The quieter the surroundings, the more successful the result.

It is important that the preparation should be fresh and accurately prepared.

Fetal hearts should be carefully watched.

Artificial delivery, when necessary, should be accomplished under chloroform.

Oligopnea should be carefully watched for and treated when present.—*The Therapeutic Gazette*.

CURE OF A VULVAL CANCER BY ZELLER'S METHOD.

Reusch relates the following case: A woman of sixty-two was attacked by profuse hemorrhage from the vagina. Her health had been failing, but she had had no local symptoms beyond hemorrhage. Only when the labia majora were separated did an ulcerated carcinoma come into view. This had originated on the inner aspect of the right labium major and then involved the labium minus and clitoris. There were no enlarged inguinal glands. The patient refused both

the knife and radiotherapy. Nothing was left but to employ the caustic-paste method of Zeller first recommended in 1912, which has never received the attention it merits. The formula is as follows: \mathcal{R} . Acid. arsen., 2.0; hydrarg. sulphur. rubr., 6.0; carbo. animal, 2.0. Misce. This powder is made into a paste with water. The mixture of silicates of potash and soda was given inwardly. Both these remedies were devised for Czerny's Cancer Institute. The paste caused a violent phlegmonous inflammation *in situ* extending down the thigh and up the abdomen. For the first the inguinal lymphnodes became swollen. The patient had to be kept under morphine. In about two weeks a great slough came away comprising the entire cancer. A course of radiography now followed and the cancer area healed over completely. Nine months have now passed without recurrence, although the enlarged lymphnodes have never undergone resolution.—*Medical Record*.

INTRACRANIAL HEMORRHAGE IN THE NEWLY BORN.

This number of the *Centralblatt* is devoted almost entirely to Mayer's analysis of the literature on this subject and report of three cases from his own experience and discussion of the source of the bleeding and the causes. The forceps had been used in Mayer's cases, and necropsy showed that the tentorium had been lacerated in each case. The pelvis was of normal size in two of the cases, but premature rupture of the bag of waters and inadequate labor contractions finally compelled operative delivery. Pressure from temple to temple and also from the frontal to the occipital bone may be dangerous, but cases are known in which the hemorrhage occurred with smooth normal delivery in women with wide birth passage and normal pelvis, who had already borne children. He cites twelve cases of this kind, remarking that they show that there must be some predisposition on the part of the child. It is possible that letting the child lie on its side may compress the veins and induce venous hyper-

emia, thus aggravating a tendency to hemorrhage in the tentorium region which the newly born might otherwise survive. The pressure from the accumulating blood explains the cases in which slightly asphyxiated newly born children became more and more asphyxiated, and explains also the sudden deaths of not asphyxiated newly born who seemed to be normal for a time and then died suddenly.

The symptoms vary as the hemorrhage is above or below the tentorium, and the reports of operative removal of the accumulated blood before irreparable damage has been done sounds encouraging. He thinks that we may be able to save many of the children by prompt intervention. With hemorrhage above the tentorium the symptoms are more of a cortical nature, principally in the domain of the facial, oculomotor and accessorius nerves and in the extremities. With hemorrhage below the tentorium, the symptoms are from the spinal nerves, such as rigid extremities, erection of the penis and wrinkling of the skin on the scrotum. Spasms have differential value only when restricted to one side or one extremity. With hemorrhage below the tentorium the children are strikingly quiet and somnolent, and there may be cyanosis; the fontanel does not bulge and the lumbar puncture fluid usually shows blood. Puncture of the subdural space through the large fontanel at the point farthest toward the side may decide the question, while it seems perfectly harmless and saves much time. With hemorrhage above the tentorium the children are restless and scream from the stretching of the dura; the greater fontanel bulges, and the vagus center, the vasomotor center and the respiration center show signs of irritation. If the children survive to the stage of paralysis the spasms subside, there is general relaxation, the reflexes die out, and the respiration becomes of the Cheyne-Stokes type. If the hematoma is not very extensive, it may be possible to aspirate the blood out through the fontanel or release it by lumbar puncture. Dutreix has reported three out of five cured by repeated puncture, and other French writers have published successful

cases of this kind. Mayer has had no personal experience in this line but his review of the literature encourages more active measures than have been the rule hitherto.—*The Journal of the Amer. Med. Asso.*

REMOVAL OF OVARIES.

There will seldom, if ever, arise the justification for the removal of both ovaries in a woman less than forty years removal of age. Better that she retain one ovary or a part of one ovary, and that a troublesome member, than to suffer a total loss of her ovarian secretions. In other words, it is better that she suffer some local discomfort than to become a hopeless neurotic. Where the uterus is deeply involved and it is advisable to remove the tubes, I am of the opinion that the best results will follow a complete hysterectomy. Less than this will fail to give complete relief and might endanger life from postoperative complications for lack of adequate drainage. — Dr. Palmer Finley in *International Journal of Surgery*.

DYSMENORRHEA.

It is very important that a girl should be educated to dress properly and her clothing should always be sufficient to keep her dry and warm. Women should be taught the great necessity of regularity in their daily stools. Most cases of dysmenorrhea due to inflammatory conditions are benefited by the use of the hot douche and of medicated tampons.—*Medical Practice*.

Editorial

PUBLISHER'S NOTICE—The Journal is published in monthly numbers of 48 pages at \$1.00 a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money order, draft, or registered letter, should be addressed to the Business manager, C. S. Briggs, M. D corner Summer and Union Streets, Nashville, Tenn.

All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

PHYSICAL EXAMINATION OF MEDICAL STUDENTS.

While much has been accomplished in the last decade in eliminating the untrained and unfit applicant for a medical degree, very little has been said or written in regard to physical requirements.

In days gone by physical examinations were not as necessary as at present; in the first place the medical course was shorter and not so trying on the body, and in the second place, should the medical student have developed some disease or physical weakness toward the end of his course, it was not such a serious matter, since he would have lost only two or three years of his life. As a matter of fact if he had been diligent in his studies and of receptive and retentive mind, unless his trouble were very serious, he was probably better off for having studied medicine.

At present, however, matters are entirely different. The preliminary education must be more thorough, the medical curriculum is longer, the vacations are shorter and a post-graduate course, while not required, is expected. Besides this, as a general rule, medical study is more expensive, year for year, than in the past, to say nothing of the increased expenses incident to the longer course.

In view of these facts it would seem wise to establish physical as well as educational standards in order that the parents, or in case the student is self-supporting, the stu-

dent himself, might not have to spend his money and time only to find out in the second, third, or fourth year of the medical course, or while in the hospital or even shortly after commencing practice, that he is suffering from tuberculosis or some other serious ailment.

Besides excluding those already unfit at the time of application, such examinations would detect ocular defects, nervous conditions and other troubles which might, if not corrected, lead to failure of the student in his work.

Regular annual examinations should also be conducted in order that defects or diseases arising in the course of the year's work might be detected before they have handicapped the student, or if serious, give the student an opportunity to drop out before wasting more time in the study of a profession which he perhaps can never practice.

Such examinations may be more general in the American universities than we suspect. If this is the case, then very little is written about them. We know from personal experience that such examinations are made at Yale on members of the freshman class, but no further examinations are made during the course. Indeed, if we remember correctly, only the academic freshman class undergoes a physical examination, such not being required in the other departments.

Physical examinations as suggested above, if made in all the medical schools and properly tabulated, would also be valuable from a sociological point of view.

W. T. B.

PRINCIPAL CAUSES OF DEATH.

Census Bureau's Summary of the Statistics for the Registration Area in 1914.

Washington, D. C., January 16, 1916.—According to a preliminary announcement with reference to mortality in 1914, issued by Director Sam L. Rogers, of the Bureau of the Census, Department of Commerce, and compiled by Mr.

Richard C. Lappin, chief statistician for vital statistics, more than 30 per cent of the 898,059 deaths reported for that year in the "registration area," which contained about two-thirds of the population of the entire United States, were due to three causes—heart diseases, tuberculosis, and pneumonia—and more than 60 per cent to eleven causes—the three just named, together with Bright's disease and nephritis, cancer, diarrhea and enteritis, apoplexy, arterial diseases, diphtheria, diabetes and typhoid fever.

The deaths from heart diseases (organic diseases of the heart and endocarditis) in the registration area in 1914 numbered 99,534, or 150.8 per 100,000 population. The death or mortality rate from this cause shows a marked increase as compared with 1909, when it was only 123.1 per 100,000.

Tuberculosis in its various forms claimed 96,903 victims in 1914, of which number 84,366 died from tuberculosis of the lungs (including acute miliary tuberculosis). As a result of a more general understanding of the laws of health, the importance of fresh air, etc., due in part, no doubt, to the efforts of the various societies for the prevention of tuberculosis, there has been a most marked gratifying decrease during recent years in the mortality from this scourge of civilization. In only a decade—from 1904 to 1914—the death rate from tuberculosis in all its forms fell from 200.7 to 146.8 per 100,000, the decline being continuous from year to year. This is a drop of more than 25 per cent. Prior to 1904 the rate had fluctuated, starting at 201.9 in 1900. Even yet, however, tuberculosis has the gruesome distinction of causing more deaths annually than any other form of bodily illnesses except heart diseases, and over 40 per cent more than all external causes, accidents, homicides, and suicides combined.

Pneumonia (including bronchopneumonia) was responsible for 83,804 deaths in the registration area in 1914, or 127 per 100,000—the lowest rate on record. The mortality rate from this disease, like that from tuberculosis, has

shown a marked decline since 1900, when it was 180.5 per 100,000. Its fluctuations from year to year, however, have been pronounced, whereas the decline in the rate for tuberculosis has been nearly continuous.

The only remaining death rate higher than 100 per 100,000 in 1914 was that for Bright's disease and acute nephritis, 102.4. The total number of deaths due to these maladies in 1914 was 67,545, more than nine-tenths of which were caused by Bright's disease and the remainder by acute nephritis. The mortality from these two causes increased from 89 per 100,000 in 1900 to 103.4 in 1905, since which year it has fluctuated somewhat.

Next in order of deadliness come cancer and other malignant tumors, which filled 52,420 graves in 1914. Of these deaths, 19,889, or almost 38 per cent, resulted from cancers of the stomach and liver. The death rate from cancer has risen from 63 per 100,000 in 1900 to 79.4 in 1914. The increase has been almost continuous, there having been but two years—1906 and 1911—which showed a decline as compared with the years immediately preceding. It is possible that at least a part of this indicated increase is due to more accurate diagnoses and greater care on the part of physicians in making reports to registration officials.

Diarrhea and enteritis caused 52,407 deaths in 1914, or 79.4 per 100,000. This rate shows a marked falling off as compared with the rate for the preceding year, 90.2, and a very pronounced decline as compared with that for 1900, which was 133.2. Nearly five-sixths of the total number of deaths charged to these causes in 1914 were of infants under 2 years of age.

Apoplexy was the cause of 51,272 deaths, or 77.7 per 100,000. The rate from this malady has increased gradually, with occasional slight declines, since 1900, when it stood at 67.5.

Arterial diseases of various kinds—atheroma, aneurism, etc.—caused 15,044 deaths, or 22.8 per 100,000, in the registration area.

No epidemic disease produced a death rate as high as 18 per 100,000 in 1914. The fatal cases of diphtheria and croup—which are classed together in the statistics, but practically all of which are of diphtheria—numbered 11,786, or 17.9 per 100,000, in that year, the rate having fallen from 43.3 in 1900. This decline of nearly 59 per cent is relatively greater than that shown by any other important cause of death. The rate has not fallen continuously, but has fluctuated somewhat from year to year.

Diabetes was the cause of 10,666 deaths, or 16.2 per 100,000. The rate from this disease has risen almost continuously from year to year since 1900, when it was 9.7 per 100,000.

The mortality rate from typhoid fever has shown a most gratifying decline since 1900, having decreased from 35.9 per 100,000 in that year to 15.4 in 1914, or by 57 per cent. This decline has been almost as great, relatively, as that for diphtheria, and has been greater than that for any other principal cause of death. The total number of deaths due to typhoid fever in 1914 was 10,185. The marked decrease in the mortality from this disease gives emphatic testimony to the effectiveness of present-day methods, not only of cure but of prevention. The efficacy of improved water-supply and sewerage systems of the campaign against the fly, and of other sanitary precautions is strikingly shown by the reduction of the typhoid mortality rate to the extent of more than five-ninths in 14 years.

Whooping Cough, Measles and Scarlet Fever—The principal epidemic maladies of childhood—whooping cough, measles, and scarlet fever—were together responsible for no fewer than 15,617 deaths of both adults and children, or 23.7 per 100,000, in the registration area in 1914, the rates for the three diseases separately being 10.3, 6.8 and 6.6, respectively. In 1913 measles caused a greater mortality than either of the other diseases, but in 1914 whooping cough had first place. In every year since and including 1910, as well as in several preceding years, measles has

caused a greater number of deaths than the much more dreaded scarlet fever. The mortality rates for all three of these diseases fluctuate greatly from year to year. The rates for measles and scarlet fever in 1914 were the lowest in 15 years, while that for whooping cough was considerably above the lowest recorded rate for this disease, 6.5 in 1904, although far below the highest, 15.8 in 1903.

Railway and Street Car Accidents—Deaths due to railway accidents and injuries totaled 7,062, or 10.7 per 100,000. This number includes fatalities resulting from collisions between railway trains and vehicles at grade crossings. The death rate from railway accidents and injuries is the lowest on record and shows a most marked and gratifying decline as compared with the rate for 1913, which was 13 per 100,000, and a still more pronounced drop from the average for the five-year period 1906-1910, which was 15 per 100,000.

Deaths resulting from street-car accidents and injuries numbered 1,673, or 2.5 per 100,000. This rate, like that for railway fatalities, is the lowest on record and shows a material falling off as compared with 1913, when it was 3.2, and as compared with the average for the five-year period 1906-1910, which was 3.7.

Suicides—The number of suicides reported in 1914 was 10,933, or 16.6 per 100,000 population. Of this number, 3,286 accomplished self-destruction by the use of firearms, 3,000 by poison, 1,552 by hanging or strangulation, 1,419 by asphyxia, 658 by the use of knives or other cutting or piercing instruments, 619 by drowning, 225 by jumping from high places, 89 by crushing, and 85 by other methods."

Careful study of the above report of the Census Bureau is well worth the time. It emphasizes the editorial we published last month in regard to the increasing mortality from diseases which are essentially diseases of old age. This report shows the increase continues merrily on its way. The tuberculosis mortality still decreases and the pneumonia decrease since 1900 is almost as great. The decline in mortality from tuberculosis has been 55.1 per 100,000 while pneumonia is right there with a decline of 53 per 100,000.

The relationship between these diseases is very evident since either must predispose to the other, and yet such relationship is not sufficiently stressed. It is gratifying indeed to see that education in regard to tuberculosis is not only rapidly eradicating that disease but at the same time lessening the mortality from pneumonia. Should the decrease in these two diseases continue, in forty years the mortality should be negligible, especially since with fewer cases and greater separation, the chances of contracting the diseases will be lessened.—W. T. B.

THE FACTOR OF POVERTY IN SANITATION.

The factor of poverty in sanitary problems was discussed in Washington, Nov. 26, by Surgeon General William C. Gorgas, whose success in cleaning up Havana and the Panama canal zone have brought him recognition as America's leading sanitarian. His audience was the Clinical Society of Surgeons, assembled in their twenty-fourth annual meeting. Dr. Gorgas said, in part:

"Such sanitary work as is necessary in the tropics is expensive, but measures directed against special disease are not the greatest good that can be accomplished by sanitation.

"Before these great results that we can all now see are possible for the sanitarian, we shall have to alleviate more or less the poverty at present existing in all civilized communities. Poverty is the greatest of all breeders of disease and the stone wall against which every sanitarian must finally impinge.

"During the last ten years of my sanitary work I have thought much on this subject. Of what practical measure could the modern sanitarian avail himself to alleviate the poverty of that class of our population which most needs sanitation? It is evident that this poverty is principally due to low wages; that low wages in modern communities are principally due to the fact that there are many more men competing for work than there are jobs to divide among these men. To alleviate this poverty two methods are possible, either a measure directed toward decreasing the

number of men competing for jobs, or, on the other hand measures directed toward increasing the number of jobs.

"The modern sanitarian can very easily decrease the number of men competing for jobs; if by next summer he should introduce infected *stegomyia* mosquitos at a dozen different places in the southern United States he could practically guarantee that when winter came he would have several million less persons competing for jobs in the United States than we have at present. This has been the method that man has been subject to for the last six or seven thousand years, but it does not appeal to me, nor, I believe, to yourselves. This method is at present being tried on a huge scale by means of the great war in Europe. I do not think that I risk much in predicting that when this war is over and we shall have eliminated three or four million of the most vigorous workers in Europe, wages will rise and for a long time no man will be unable anywhere in Europe to get a job at pretty fair wages.

"But I am sure that every sanitarian would much rather adopt measures looking toward the increase of jobs rather than, as we have done in the past, submit to measures that decrease the number of competitors for jobs.

"I recently heard one of the members of the Cabinet state that in the United States 55 per cent of the arable land, for one reason or another, is being held out of use. Now suppose in the United States we could put into effect some measure that would force this 55 per cent of our arable land into use. The effect at once would be to double the number of jobs. If the jobs were doubled in number wages would be doubly increased. The only way I can think of forcing this unused land into use is a tax on land values.

"I therefore urge for your consideration, as the most important sanitary measure that can be at present devised, a tax on land values."

PNEUMONIA.

Ten per cent of the deaths in the United States result from pneumonia. It is estimated that during the past thirty days

this rate has been doubled in some sections. Tuberculosis and heart disease, each causing one-ninth of all fatalities, are the only diseases that outrank pneumonia among the legion of the men of death, but in certain cities pneumonia is steadily increasing and even has surpassed the mortality from tuberculosis. Seventy per cent of all cases occur between December and May. It is distinctly a cold weather infection, seemingly brought by wintry blasts, but especially prevalent during the winter season only because its victims are rendered more susceptible at that time by exposure, debilitating influences and the presence of predisposing infections.

Pneumonia principally affects those at the extremes of life, but no age is exempt. It is invariably a germ disease. The predisposing and exciting organisms are so numerous that it would be futile to attempt their enumeration. Many of them are constantly present in the mouths and throats of healthy persons and it is only through the aid which we unwittingly extend to them that they are transformed from harmless organisms to one of man's most powerful enemies.

The presence of other diseases is the great predisposing cause of pneumonia. They prepare the soil for invasion. Holding first rank in this category is influenza, the increased incidence of pneumonia at this time being largely due to the present epidemic of la grippe. Individuals suffering from this infection are peculiarly susceptible to respiratory complications and should properly observe every hygienic rule. Inflammation of the upper air passages, pharyngitis, bronchitis and tonsillitis often predispose to the development of the disease, particularly among the aged and infirm. The acute contagious diseases of childhood, more especially measles and whooping cough, frequently prepare the way for pneumonia. Anyone who through neglect or carelessness permits the spread of these infections is therefore open to the severest condemnation. Exhausting disease of whatever nature is often sufficient to so reduce our resistance that we are unable to cope with organisms which should be easily overcome and hence predisposes to the infection.

Debility, either temporary or chronic, developing from any cause, increases susceptibility. Because of this the disease most often attacks those at the extremes of life. Among debilitating influences must be mentioned cold, exposure to penetrating winds and the chilling of body surfaces are a result of wetting. The combination of lack of food and fatigue proves particularly disastrous during the winter season and is a condition to be avoided whenever possible. Bad housing, mental or physical harassment and overwork are alike the advance agents of the infection. Overcrowding in street cars, theatres and other public places is unquestionably in part responsible for the spread of pneumonia in cities, as far greater opportunity is thus offered for the dissemination of the predisposing diseases through indiscriminate coughing and other means of droplet infection, as well as the directly injurious effects which inevitably result from exposure to such environment. The overheating of rooms is also seemingly harmful. Promiscuous expectoration may be and probably is a factor in infection and consequently should be avoided by every citizen. A remaining most important agent should be mentioned, alcohol. It is in truth the handmaiden of pneumonia, and there is none more certain or more sure of success, especially if liberally and continuously used.

While the foregoing facts constitute in part our knowledge of the reasons for the widespread dissemination of an infection which carries with it a mortality of from ten to thirty per cent, it should be remembered that our scientific data are not yet complete. There are problems connected with immunity, predisposition and the occurrence of epidemics which are yet to be solved. It is known that pneumonia frequently attacks those who are perfectly well and who apparently have observed every hygienic rule. Whether this is due to the increased virulence of the organism or to other causes is unexplained. It is, however, recognized that avoidance of the factors so briefly enumerated will in large part diminish individual susceptibility and therefore the incidence of the disease.

Reviews and Book Notices

"A Treatise on the Principles and Practice of Medicine."—By Arthur R. Edwards, M.D., Professor of the Principles and Practice and Clinical Medicine and Dean of the Northwestern University Medical School, Chicago. New (third) edition, thoroughly revised. Octavo, 1022 pages, with 80 engravings and 23 full-page plates in colors and monochrome. Cloth, \$6.00 net. Lea & Febiger, Philadelphia and New York, 1916.

We acknowledge with thanks to the publishers the receipt of this excellent textbook upon the Principles and Practice of Medicine in its third edition. The popularity of the work is attested by the rapidity with which one edition followed the other. The work has been completely revised and such changes and additions made as serve to bring it fully up-to-date. Practically new chapters have been added, among which may be mentioned those on icteroanæmia, the ductless glands, x-ray findings, erythremia, sepsis, high calory feeding in typhoid, sporotrichosis, blasto-mycosis, trichnosis, pellagra, arrhythmia, tropical splenomegaly, etc. Recent additions to medicine as a result of investigations by various men have been given due consideration. The work has been brought fully abreast with the times. Despite the additions made the book has been reduced by judicious culling to even a smaller size than former editions. We regard the work as a most valuable book for the up-to-date practitioner and to advanced students, and predict that it will immediately take its place among the most important text books upon medical practice. We take great pleasure in commending the work to the medical profession.

"Painless Childbirth, Eutocia and Nitrous Oxid-Oxygen Analgesia." By Carl Henry Davis, A.B., M.D., Associate in Obstetrics and Gynecology, Rush Medical College in Affiliation with the University of Chicago. Assistant Attending Obstetrician and Gynecologist to the Presbyterian Hospital, Chicago. Chicago, Forks & Co., 1916.

We are in receipt of this little volume and have read it through with great interest. The author puts forward the advantages of nitrous oxid-oxygen analgesia as an agent

for securing painless labor. The various methods for securing eutocia in recent years, notably the lately exploited "Twilight Sleep," or Dammerschlafl, are fully discussed and the merits and demerits of each carefully considered. The advantages of the nitrous oxid-oxygen analgesia are illustrated by a series of cases in which it was successfully employed by the author and others at the Presbyterian Hospital of Chicago and other American hospitals so that the method is no longer in the experimental stage. Freedom from danger to mother or child is a great recommendation for the employment of this method. Expense of the gas and cumbersome apparatus are difficulties in the way of its being adopted generally. The author urges as an argument for its advantages that the method obtains analgesia to any extent, not amnesia the great result of the twilight sleep.

The little book, in that it is the only work devoted to the discussion of the various methods used to secure painless childbirth and the first report of the use of this anesthetic in obstetrics, should prove interesting and instructive to every physician.

"A Textbook of Nervous Diseases for Students and Practising Physicians." In Thirty Lectures. By Robert Bing. Dozent for Neurology at the University of Basel. Only Authorized Translation. By Charles L. Allen, M.D., Los Angeles, Cal., with One Hundred and Eleven Illustrations in the Text. New York. Rebman Co., 141, 143, and 145 West 36th St.

This is an excellent textbook upon the subject of nervous diseases that is sure to become popular with the English-speaking medical public. The author, for convenience of reference and for systematic arrangement, has presented his book in lecture form. The work is exhaustive, covering the entire field of nervous diseases in a concise and readily accessible form. The work is fully illustrated throughout.

The translation, by Dr. Allen, is well done and presents the views of the author as nearly in his own language as is consistent with clear and readable English. It is a thoroughly useful, practical and up-to-date work and should find a place in the library of every progressive physician.

Publisher's Department

AUTO-TOXIC ILLS AND THE LIVER.

Auto-intoxication is so frequently due—directly or indirectly—to hepatic torpor, that stimulation of the liver becomes, perforce, the first and most important detail of its treatment. The almost specific action of Chionia in increasing hepatic activity without producing catharsis gives it, therefore, a highly important place in the successful management of auto-toxic conditions. The results that follow its use are especially satisfactory in that they are accomplished through physiologic or natural channels. One to two teaspoonfuls in water, three times a day will rapidly restore biliary activity and thus remove the train of auto-toxic symptoms commonly described as biliousness.

HERE IS A SIMPLE PRESCRIPTION TO CHASE AWAY GRIP.

Take equal parts of Listerine, Hydrogen Peroxide, water, Spray the nose and throat. Keep your system in good condition; observe the simple rules of hygiene, and do not trouble yourself about the presence of grip.

The above is a prominent physician's prescription for a throat wash recommended by Dr. Samuel G. Dixon, State Commissioner of Health. It is offered on the theory that an "ounce of prevention is worth a pound of cure." The use of this prescription is conducive to cleanliness, and while these ingredients will not kill the germs of pneumonia, it will go a long way in warding off the malady which just now is claiming so many victims. This remedy can be obtained at any drug store at a moderate cost.

Dr. Dixon in his weekly health bulletin, says:

"When compelled to submit to the evils of crowded civilization during grip and pneumonia seasons, it is well to get your doctor to write a prescription for a good disinfection solution to rinse the mouth and throat with several times a day. It has been demonstrated that there are many pneumonia germs in the mouth of those suffering from the grip."

"The Chinese method is the best after all," said a Pittsburgh physician this morning. "In China, you know, they pay their doctors to keep them well. If people would see their family physicians now and then for an examination, there would be fewer cases of serious illness."—*Pittsburgh Chronicle-Telegram*.

PALPITATION OF THE HEART.

Cardiac palpitation and the whole train of subjective symptoms that often keep the heart sufferer in constant distress are not infrequently completely controlled by Cactina Pillets when everything else fails. Clinical experience has shown that Cactina is a persuasive tonic not a therapeutic lash—and the skilled clinician appreciates the distinction. One to three pillets every three or four hours will support the heart and relieve the patient's trepidation.

GRIPPE.

"Grippe is an epidemic catarrhal disease, and is usually accompanied by or complicated with severe cephalic, thoracic or abdominal disorders, rheumatism, etc.

The complications are legion, embracing almost every form—respiratory, circulatory, digestive, urinary and nervous—affecting the organs of sight, hearing, olfaction, gustation, etc.

We think that all who have made a test of the action of Tongaline, either in the acute stage of the malady, or in the period of convalescence marked by the extreme nervous disturbance above alluded to, will be convinced that Tongaline has a direct and marked influence for good.

There is not an organ or function of the body which may not be so impaired by grippe as to lead to a permanent disability, but on account of the extraordinary eliminative action of Tongaline, this rarely occurs if that remedy is used, since there is then no opportunity for such an accumulation of the poison as to induce permanent harm."

INTEROL.

The Obstipation, Stasis, Autotoxemia Syndrome is complex in its aetiology as well as in its nosology. Anything that interferes with the calibre of the gut, or with the free passage of intestinal contents through the tube, results in a difficult passage of the bowel contents along the intestinal canal—Obstipation.

This may be a ptosis, or displacement of the gut at some point, a kink, which is a bend produced by a bunch of new formed tissue, abnormal sagging of suspensory structures, or dislocation of some part of the tube. This, together with abnormal dryness of lack of lubricating material due to disturbance of the intestinal mucus glands, results in stagnation of the current, stoppage in many instances, a damming back of the current—Stasis.

As a result of these influences, opportunity is given for increased bacterial or chemical action, the production of an abnormal amount of toxins of unusual virulence, irritation and disturbance of the filtering or protective action of the mucous membrane and resulting absorption of increased quantities of poisonous material—autotoxemia.

As a result of so many factors working more or less inter-dependently, is the establishment of the Syndrome—a com-

plex group of many symptoms—that may simulate about any disease or diseased condition met with in medicine, or any of its branches.

Furthermore, these conditions, if allowed to go uncorrected, may and often do, result in serious and even fatal disease.

The ideal treatment for such conditions is lubrication. The ideal lubricant is Interol.

“Elixir Saloform Comp., Flexner.” Contains 20% alcohol. An efficient remedy for Rheumatism, Gout, Cystitis and Uric Acid Solvent. Prepared for physicians’ prescriptions only. Robinson-Pettet Co., incorporated. (See adv. in this issue.)

NASHVILLE JOURNAL — OF — MEDICINE AND SURGERY

CHARLES S. BRIGGS, A.M., M.D., Editor.

W. T. BRIGGS, B.A., M.D., Associate Editor.

Vol. CX.

MARCH, 1916.

No. 3

Original Communications

CASES OF RENAL TUBERCULOSIS ILLUSTRATING MODERN METHODS OF DIAGNOSIS.*

BY HOWARD S. JECK, PH.B., M.D.,
New York, N. Y.

Renal tuberculosis occupies a pre-eminent place in the list of those diseases whose initial symptoms are apparently so insignificant and whose onset is so insidious that the true state of affairs is either entirely overlooked or else recognized only after it is too late to accomplish the most good.

A large number of the cases that come under our observation, exhibit symptoms which are referable solely to the bladder in the guise of a mild cystitis, the patients perhaps complaining only of a slightly increased frequency of micturition by day, not even being disturbed once at night to empty his bladder. Here the temptation on the part of many physicians at once arises to treat such cases lightly—doubt-

*To the courtesy and generosity of Dr. Edward L. Keyes, Jr., with whom I am now associated, I owe the privilege of employing the above cases, which have been selected from his wonderful storehouse of instructive case histories.

less to dismiss the patient with assurances that his condition is one of a mild inflammation of the bladder which, in all probability, will soon right itself after an irrigation or two, plus a few tablets of urotropin.

On the other hand, the onset may be so stormy or symptoms so terrifying, that we at once think of all the horrible conditions to which the genito-urinary tract is heir. But once our suspicion is aroused as to the possibility of tuberculosis of the kidney, the question of an exact diagnosis, the question of which kidney is involved, and the condition of the other kidney (on which naturally depend the course to pursue) are matters not always easy to decide.

To this end, cystoscopy, ureteral catheterism, renal function tests and the X-ray, lend themselves as invaluable aids. But we must remember that even with so much assistance at hand, the pitfalls are many and it is with the hope of pointing out a few of the former as well as emphasizing the more certain means of diagnosis, that I feel justified in this presentation.

Case I—E. P. was first seen in September, 1907. He then complained of an ulcer on the penis and frequent and painful urination. One brother had died of pulmonary tuberculosis. The ulcer had appeared a year previously, beginning with a redness of the meatus, which persisted, with superficial ulceration. No history of exposure. In April, 1907, the dysuria began, and at the time he first consulted Dr. Keyes, he was urinating every two hours, day and night. He had also experienced a chill three weeks before this time.

The patient had never noticed any blood in his urine. His weight had dropped from 170 to 149. Physical examination showed his kidneys to be insensitive, and his prostate and seminal vesicles were negative.

The urine was acid, showed a fair amount of pus and albumin, but no casts. No T. B. bacilli found.

A month later the patient was seen again. In the interim he had suffered an attack of fever (T. 105), and also an intense pain in the right testicle and right side, lasting four

days. The urine suddenly showed a great increase in pus after which relief followed. All this time the prostate remained unchanged, but the right kidney was now tender on palpation.

During the next couple of months the patient showed a quite perceptible general improvement on anti-tubercular treatment, but had at times passed some blood in his urine.

However, in January, 1908, he began to have pain all over the abdomen. Cystoscopy having been unsuccessfully attempted two months previously, separate urines from the right and left kidney were now obtained by means of the Luys' urine separator and showed the following: From the right kidney, 14 cc. of urine, containing 2.4% urea, and a slight amount of pus; from the left kidney $\frac{3}{4}$ cc. of urine, a very little urea and a large amount of pus. A nephrectomy of the left kidney a few days later revealed a small tubercular pyonephrotic kidney, with an apparently normal ureter.

In April, 1910, this patient was heard from directly for the last time. By virtue of his social status he was forced to lead a life which was not in conformity with his personal welfare, doing hard manual labor most of the time. And while he has suffered various setbacks, he always managed to readily recuperate under enforced rest and anything like proper hygienic conditions. He had even gained considerable weight when, another setback occurring, due to over-exertion, he went to the Adirondacks, immediately contracted pneumonia, and died within a week of its beginning.

While the above case does not serve especially well to illustrate a pre-operative diagnosis of renal tuberculosis, inasmuch as there was no X-ray and no T. B. bacilli were ever found in his urine, it does bring out a certain fairly infrequent symptom which would be extremely—I might almost say—fatally, misleading in the diagnosis of surgical conditions of the genito-urinary tract but for other aids in diagnosis. I refer to the phenomenon of crossed renal pain. That this was renal involvement of a kind requiring surgical interference was well evidenced by the blood and pus in his

urine, together with his history of pain at various times. But had we gone strictly by the pain, whose location was chiefly in his right testicle and right side, the patient would have been the victim of a nephrotomy, at least of his right kidney. However, the presence of 2.4% urea with a slight amount of pus (probably pus from the bladder as the Luys' separator does not always preclude this possibility) from the right ureter as against a very slight amount of urea and a large amount of pus from the left ureter, dispelled all question of doubt as to which kidney should be explored.

Case II, E. B.—Male, gave the following history: A father and two brothers died of pulmonary tuberculosis. Others in the family had lived to ripe ages.

At the age of 31, the patient passed blood in his urine. Three years later he experienced right renal colics and slight irritability of the bladder. The colics continued every few weeks for seven years. Then, because of an attack of intense bladder symptoms, and profuse hematuria, Dr. Charles McBurney diagnosed the condition as renal calculus (this was in 1900—the pre-radiographic days), explored the kidney, and found nothing.

The operation relieved the renal colics. But the bladder still caused him untold agony, the patient urinating blood every two or three hours.

On January 16, 1908, eighteen years after the first symptoms of his disease, the patient consulted Dr. Keyes, having in the interval suffered three vain searches for stone and two cystoscopies, and having developed double tubercular epididymitis.

Physical examination revealed nothing except ridgy seminal vesicles. The urine was cloudy and contained a small amount of albumin, pus, red blood cells, a few hyaline casts and many T. B. bacilli.

The X-ray revealed an irregular shadow in the right kidney region, which the radiographer reported as "consistent with a diagnosis of renal tuberculosis."

Cystoscopy was now tried again, but failed on account of the extreme pain attending it. Recourse was then had to the experimental polyuria test, which showed fairly good, though deficient renal function. The diagnosis of tuberculosis of the right kidney being now fairly certain, the kidney was removed in April, 1909. Though the pelvis was uninvolved, the parenchyma was riddled with abscesses, the latter confirming the diagnosis.

I had the pleasure of seeing this case as recently as February 2d of this year. While the function of his remaining kidney is evidently quite poor, as shown by an output of only 16% of phenolsulphonephthalein (injected intravenously) in the first half hour and 10% during the second half hour, he says he feels fine and has suffered only moderate inconvenience due to frequency. His weight is now 178 and has remained so for quite a time. While his urine still contains pus, a careful search failed to reveal the presence of T. B. bacilli. Could Dr. McBurney have availed himself of the use of the X-ray and our present renal functional tests, he doubtless would not have been satisfied with a mere exploratory operation. And, finally, eighteen years later, when the X-ray, together with the patient's symptoms and urinary findings, did point out the true diagnosis, and the kidney which was involved, or most involved, it remained for the polyuria test to decide the question of operating at all. For, while the right kidney was tubercular without a doubt, who could offer any prognosis as to the outcome in the event of a nephrectomy, without some knowledge of the condition of the other kidney? That the X-ray showed nothing definite on that side, told us nothing of the kidney's functional power.

Since cystoscopy, or the passage of any instrument of any size into the bladder could no longer be endured, reliance had to be placed on the experimental polyuria test. This showed fairly good renal function *somewhere*, and inasmuch as the X-ray had shown what was probably a considerable involvement of the right kidney, it was inferred that the "fairly good renal function" belonged chiefly to the left kidney.

The case, also well emphasizes, the fact that renal tuberculosis may exist for a long time and then respond to proper treatment.

Case III, G. S.—In October, 1904, this patient then nineteen years of age, consulted a physician in Albany N. Y., because of moderate frequency of micturition by day and night, attended by much terminal pain and blood on a few occasions. T. B. bacilli were found in his urine at that time, which gave a positive guinea-pig test. Cystoscopy was performed and as a result the patient had chills, a rise in temperature to 104, and some pain over his left kidney. A diagnosis of tuberculosis of the prostate was made and the patient put on treatment which resulted in an amelioration of his symptoms for some time.

In January, 1909, Mr. S., first came to Dr. Keyes on account of frequent urination, incontinence, and a swollen testicle. There was no family history of tuberculosis, and his previous history was that given above. A twenty-four hour specimen of urine gave the following analysis: Amount 2070 cc., sp. gr., 1014, acid, urea 1.2%, a trace of albumin, no sugar, white blood cells, red blood cells, but *no tubercle bacilli*. On physical examination it was found that he had a lump in the left lobe of his prostate and also in the tail of his right epididymis. There was in addition, a dense stricture extending from the peno-scrotal angle to the triangular ligament.

During the next few days, the stricture was dilated sufficiently to permit a cystoscopy which showed the bladder to be much ulcerated. The right ureteral orifice was considerably congested, and the left resembled an irregularly-shaped volcanic crater. It was impossible to catheterize either ureter.

The X-ray report was pyonephrosis of the left kidney. After an injection of 2 cc. of phloridzin, no sugar appeared in the urine until two hours and fifteen minutes had elapsed. A month later, on account of his stricture having retracted, internal and external urethrotomy were done, and

it is of interest to note that in place of prostate, there was a cavity as big as a plum, with hard tubercular walls. Six days later, another attempt was made to catheterize the patient's ureters without success. His bladder picture was the same as before. Likewise unsuccessful was an attempt to pass a Luy's urine separator. At this time, another phloridzin test gave no sugar at the end of four hours. Two experimental polyuria tests made a week apart, showed rather poor functioning power of the kidneys. Although it was impossible to obtain separate urines from the kidneys, in view of the functional tests all pointing to an involvement of one or both of these organs, it was decided to perform an exploratory nephrotomy especially since the patient was apparently getting worse in spite of all treatment.

The location of the pain in his early history and the X-ray report certainly indicated the left kidney as the more probable one to be affected. Therefore, on March 13, 1909, a nephrotomy of the left kidney was done. The kidney was low and lay almost transversely. The pelvis and ureter were entirely uninflamed but much dilated, the ureter being larger than a lead pencil. An incision into the ureter allowed about 100 cc. of apparently clean urine to escape. A soft rubber catheter was introduced into the ureter and stitched into the lumbar wound. Now comes the startling feature of the whole story. Immediately after the operation, *all urine stopped coming from the urethra and perineal wound* and in its stead came only pus, while apparently normal urine flowed from the tube in the loin. This continuing to be the case, forced the conclusion that the right kidney was either absent or practically destroyed; the latter view was substantiated by an excellent X-ray, subsequently made, showing a small atrophied kidney on the right side.

The patient made an uninterrupted recovery from his kidney operation, but his perineal fistula never completely healed.

Three years after his nephrotomy he was re-operated upon in order to close his perineal fistula and died as a result of

shock. In the meantime, however, he had gained much in weight, had improved generally and returned to his work. No. T. B. bacilli could be found in his urine at the time of his last operation.

Here, then, is an instance in which the X-ray, which had rendered so valuable a service in the preceding case, deceived the surgeon and then later redeemed itself, to some extent, by demonstrating the size of the right kidney. For the radiograph of the left kidney showed a rather typical picture of pyonephrosis. Hence, obviously, the lesson to be learned from this is that under certain conditions, water may throw a shadow similar to that of pus, so that it is not always possible to differentiate a pyonephrosis from a hydronephrosis by such means.

The crater-like appearance of the right ureteral orifice, though quite suggestive, was hardly evidence enough to warrant a diagnosis of tuberculosis of the right kidney, but had it been possible to catheterize both ureters or even only one (either one), the question of the involved kidney, the approximate amount of involvement, and the condition of the opposite kidney, could have been readily cleared up.

Case IV,—J. L. Age 30, was admitted to Dr. Keyes' service in Bellevue Hospital in May, 1912, with the simple, but all-important, history of hematuria and frequency of urination for one year. A physical examination of the lungs revealed probable tubercular lesions. Cystoscopy with catheterization of the ureters was performed at once, showing pus from the right ureter whose orifice was swollen, with deficient function of the right kidney. A microscopical examination of the urine from this kidney showed the presence of Gram negative cocci (which could not be grown, however,) and later a culture of the bladder urine showed Gram negative cocci which were positively identified as gonococci.

Finally, T. B. Bacilli were found in the bladder urine. Suspecting the right kidney of being tuberculous, 25% argyrol was injected into the right renal pelvis, and the right

loin X-rayed. An excellent radiograph showed small round shadows throughout the kidney, and a mouse-eaten appearance of some of the papillae, a typical tuberculous picture. This diagnosis was subsequently confirmed by the finding of T. B. bacilli in the urine from the right kidney. The right kidney was accordingly removed, and found to be rotten throughout. It was likewise full of argyrol. When last heard from (February, 1915), the patient had gained considerable weight despite his lung condition.

The above case was selected mainly to show what was doubtless a gonococcus infection engrafted on to a tubercular kidney, as it is only reasonable to suppose that the Gram negative cocci obtained from the right ureter were the same as those in the bladder which was subsequently found to be gonococci.

Aside from the readiness with which the diagnosis of tuberculosis of the right kidney was made (by virtue of the T. B. bacilli in the urine, the swollen right ureteral orifice, pus from the same, and deficient function of the right kidney by the phenolsulphonephthalein test, the case is of further interest because of the corroboration of this diagnosis by pyelography after the injection of an organic silver preparation.

Case V.—P. B., 27. Entered St. Vincent's Hospital in February, 1911. Family history of no importance; was a heavy drinker; denied venereal disease. Pneumonia two years before admission. On his neck was a scar from a gland which suppurated at that time. Hematuria was his chief urinary symptom. Six years before he had had profuse, spontaneous and painless passage of blood in his urine, which stopped after a few days. When he was admitted to the hospital he had been bleeding again, but there were no other symptoms referable to his urinary tract. He had lost no weight. Immediately after entering the hospital he had delirium tremens, which lasted two weeks. At the end of this time, physical examination showed a very large low kidney on the right side and a slight pulmonary dulness at

the base of his left lung. Cystoscopy revealed a normal bladder and normal ureteral orifices. The ureters were readily catheterized, the result of functional tests made being as follows:

Right kidney.—5 cc. of urine (in eight minutes) containing numerous casts, a few w. b. c., but no pus; 1.3% urea.

Left kidney.—3 cc. of urine (in eight minutes), containing no casts, no pus; 0.3% urea.

One cc. of phenolsulphonephthalein was now injected intravenously. It appeared in eight minutes from the right side and in nine minutes from the left. During the next thirty minutes, the right kidney excreted 3% of the drug, while only a trace was obtained from the left side; in the following thirty minutes, the right side excreted 5.6% while the left showed only 1.7%.

The above findings hardly seemed to jibe with the patient's symptoms, and physical examination which suggested tumor of the right side. However, the amounts of urea and phenolsulphonephthalein excreted from the right side were so much greater than the amounts from the left side, that this fact certainly pointed to at least a greater involvement of some kind of the left kidney, irrespective of the condition of the right.

Accordingly the left kidney was exposed and its upper third found to be a cheesy mass, obviously an old tubercular process. The patient was then turned over and an exploratory incision revealed a low-lying right kidney which was hypertrophied to twice its size, but otherwise apparently normal. The patient was now turned back and his left kidney removed. Both wounds healed by primary union, the patient making an uneventful recovery.

In later reviewing the case Dr. Keyes states that he would have been warned of tuberculosis on the left side had he but seen some pus in the urine from that side, for, as he further says, "casts on one side and deficient function with pus and without marked enlargement of the kidney upon the other side, is very suggestive of unilateral tuberculosis." The

case is of further interest on account of the greatly hypertrophied right kidney. Aside from demonstrating the capability of one organ to take over the work of its impaired mate, it should emphasize the necessity of keeping in mind such possibilities in making a diagnosis.

Selected Articles

PUERPERAL INSANITY.

ELIOTT BISHOP, M.D.,
Brooklyn, N. Y.

The request from the secretary of this society is a command when he asks me to read a paper, otherwise I should be more profuse in my apology for the modest effort I present to you tonight. For me to present to the gentlemen of achievement before me any of my rare dashes into the field of major procedures in gynecology or obstetrics would be farcical and I was casting about for something of interest for us all to think about together tonight when two post partum patients in the Low Maternity one afternoon developed mental disturbances.

As we must all admire the German attitude of continually interrogating, so we must, when something unusual occurs, say "Why" and "When?" and then become Yankees again and say "What are we going to do about it?" Every few years we must take stock of just such questions and it is perhaps a reasonable duty for some of the younger and less active members of this society like myself to make the inventory.

DEFINITION.

Is it an entity? In Peterson's "Obstetrics," Lewis, of Chicago, tells us that the opinion is gaining ground that it is a coincidence and without etiological relation to maternity and that to childbearing can we probably assign only an exciting etiologic relation in the production of an outbreak of insanity. The study of so-called puerperal insanity then resolves itself into the study of the different types of mental disorder

as they may occur and reveal themselves in a pregnant, parturient or puerperal woman. Pp. 825-830.)

Lee, of Manchester, England, in his exhaustive treatise, "Puerperal Infection," refers very casually to the maniacal symptoms of the infection. (P. 290.)

Williams, in his "Obstetrics," however, speaks assuredly of puerperal insanity and gives definite etiological factors, two of which are the result of childbearing. (Pp. 915, 916.)

Hirst, in his "Practice of Obstetrics," feels that it is an entity and more distinctly a disease of this period because of the etiological features he mentions and which will be referred to later. (P. 248.)

Webster, in his "Text Book of Obstetrics," discussed it as an entity under a separate heading, but not by any etiological factor does he separate it from other psychoses. It is in the frequency of its occurrence that he quotes from Clouston, of Edinburgh, *viz.*, one in 400 labors, in which Hirst concurs that we may infer it is a distinct disease. (P. 613.)

Berry Hart, of Edinburgh, in his "Guide to Midwifery," says "Insanity may come on in women" while childbearing, and refers to predisposing causes, but gives no well defined picture of the condition. (P. 574.)

Wright, of Toronto, in his "Text Book of Obstetrics," refers to insanity of pregnancy: symptomatically ordinary insanity, but etiologically speaking, the statement that constipation is frequently marked in the barest allusion. (P. 430.)

De Lee, of Chicago, "During the puerperium and lactation, insanity is a not infrequent disease," and from his discussion of it he very apparently holds it as an entity. (P. 373.)

Tweedy & Wrench discuss insanity at more length than any of the other authors and must be convinced that it is a definite disease. (P. 401.)

Edgar refers to the "essential puerperal psychoses" and discussed their etiology and time of occurrence very definitely. (P. 800.)

The most comprehensive work on this subject, however, is that in the *Journal of Obstetrics and Gynecology* of the British Empire, of Robert Jones, Superintendent of London County Asylum, Claybury, England, and to quote him is most convincing. "Of the specially puerperal cases—and it is in this period that I recognize a special form of insanity—more suffered from mania than melancholia."

Having covered a fair field of literature in this subject of definition we must now seriously consider the question—Have we or have we not a definite disease? Shall we go on to discuss this subject at greater length or shall we put it in the category of a broken wrist or an attack of diphtheria, either of which might occur after the time that any woman had had a baby? If I should say the latter, I should have to conclude this paper and take my seat. So let us go a little farther along and discuss its frequency before the question is answered.

FREQUENCY.

In reference to its frequency, we find among the authorities a great deal of variation and it again shakes our faith in the value of statistics.

In an edition of forty-one years ago of Fordyce Barker's "Puerperal Diseases," he gives the ratio of cases of puerperal mania to total labors in Bellvue as 1-80. I have purposely referred to the age of this book because I shall refer to it again in discussing an attributed etiological factor. Not long ago after this work appeared, McLeod took the statistics of births in England and Wales for four years (1878-82) and found the proportion of women committed for puerperal insanity was 1,794—3,500,000 labors, or 1-2000. Baker himself was interested in the variation of statistics and explains part of the difference from the fact that there were many unmarried women at Bellevue; and while there were also among the foreign records, in the old countries, the fact of being a mother and not a wife was felt far less keenly, if at all than in America! (Pp. 160-191.)

Williams refers to more modern statistics of Berkley and of Jones, who noted it in 1 in 616 and in 1,100 labors respectively, but Williams's own experience has been less frequent.

Hirst states "About one in 400 women confined become insane;" a flat if not grammatical statement, and this proportion agrees with, if not taken from, the experience of Clouston of the Edinburgh asylum. Hanson's figures are about the same, 1-386.

Let us get at this subject of frequency from the opposite point of view. Among cases of insanity how many are associated with childbearing? Clouston, of Edinburgh, among 1,500 women, found 10 per cent were classified as suffering with puerperal psychoses and most of the earlier figures (and here we have the first real thought) before the anti-septic era give similar percentages—the New York State hospitals from 1888 to 1895 give only 5 per cent as puerperal in origin. Before we draw a too hasty conclusion, let me quote Lane based on observations in the Boston Insane Hospital for ten years, "that insanity associated with childbirth occurs only one-half as frequently as does insanity among women in general of childbearing age. The vast majority of women who become insane are between the ages of twenty and fifty. The task of bearing and nursing children occupies a considerable portion of the time of the average woman during these ages. Therefore, we should expect a large proportion of cases of insanity to begin during such time even without casual connection." According to Lane's view the childbearing process gives a certain degree of immunity to insanity instead of predisposition thereto!

On the other hand he points out that there are many more single than married women in asylums—perhaps unmarried on account of their defects. Hirst says of all cases of insanity in women about 8 per cent have their origin in the childbearing process, while Berry Hart gives the lower percentage of five. De Lee, in his textbook—the most recent at my command—gives the high percentage of 10-18 of female inmates affected at this time.

The most reliable figures I have yet obtained came recently to hand through the courtesy of Dr. Ziegelman, one of the resident psychiatrists at Kings County Hospital, and he tells me that of 454 female admissions to the observation ward there, from October 1, 1914, to March 18, 1915, there are twenty-six cases of puerperal insanity, practically $5\frac{3}{4}$ per cent. These are not very different, except suggestively lower than Jones, of London, who, in 1903, found from 6.4 per cent, private, and 8.1 per cent poor class patients then in the London Asylum.

With so much information, vague and meagre as it is, let us pause a moment and weigh the evidence. As our ideas of pathology change with time, so must our viewpoint as to morbidity and the most recent ideas must settle such questions.

Williams, Hirst, Edgar, Webster, De Lee, Jones and Tweedy & Wrench, refer to it absolutely as a disease. Wright of Toronto and the Englishmen Berry Hart and Let are more vague, and only Lewis, of Chicago, calls its occurrence a coincidence. When we consider its frequency, if only we accept the very conservative estimate of Williams and the definite figures from McLeod, of England, of 1-2000 births and are not so radical as Hirst the obstetrician and Clouston the Edinburgh alienist, who state 1-400, to say nothing of Fordyce Barker's 1-80, we must feel that there is more than a coincidence, and if we consider the large percentage who are confined to asylums suffering from it, I feel we have all the evidence needed.

Causes must be studied before we can put pathology on a sound basis, to say nothing of diagnosis and treatment. Here again we find many authorities in disagreement and at times extremely vague.

Williams, of the school that, I think we all feel has, through the laboratory, magnified the science of medicine perhaps sometimes to the detriment of its art, says:

"Puerperal psychoses may be due to one of three causes: Infection, auto-intoxication, or direct liability of the nervous

system. Of these, infection is by far the most important. This fact has long been recognized, but it is only of late that the bacteria concerned have been identified, and then only in a small proportion of cases. In two of the three instances which have come under my observation, the infection was due to the streptococcus, and in the third to the streptococcus and colon bacillus."

Berkeley likewise reports a case due to the organism first mentioned. Auto-intoxication is also a frequent etiological factor, and it is probable that the vast majority of mental disarrangements following eclampsia are due to this condition. Ordinarily, insanity is regarded as a rare complication of eclampsia, though Olshauser observed it in 6 per cent of his 515 cases. According to Hansen and Picque infection and auto-intoxication are responsible for more than 80 per cent of all cases, while the remainder are to be attributed to other causes, occurring particularly in women afflicted with hereditary tendencies, "the exciting cause of the insanity being shock, extreme mental depression or the rapid loss of a large quantity of blood."

The general trend of investigation of etiology and pathology has been of course to ascribe definite tangible factors as the cause of definite organic changes, and we hear less and less of idiopathic diseases and functional conditions, and while the view of Williams may seem to be almost too definite, please contrast it with the causes ascribed by Hirst, which he divides into "predisposing — the nervous excitement of gestation in women predisposed by hereditary influence to mental breakdown, great reduction in physical strength and prolonged mental strain or worry * * * ; the exciting causes may be exaggerated anæmia, as from prolonged lactation, septicæmia; albuminuria; profound emotion or exaggerated fear of impending danger; remorse and shame of illegitimate pregnancy; the grief of a deserted woman; accident or hemorrhage; great physical or mental exhaustion. In my experience insanity in the childbearing

woman has almost always resulted from some profound emotion."

Webster, of Chicago, says: "Frequently there is a predisposing cause—e.g., bad heredity and prolonged mental or physical strain. Anæmia, sepsis, albuminuria, marked emotional disturbance and the pain and excitement of labor."

Berry Hart only mentions the predisposing causes of a neurotic constitution, too frequent pregnancies, too prolonged lactation, and in some cases the shock of a seduction ending in conception.

Wright, of Toronto, as I have stated before, says: "Constipation is frequently very marked,"—whether he means as a cause or a symptom is problematic.

De Lee, of Chicago, says: "Puerperal infection, mastitis, eclampsia and allied toxemias, post partum and other hemorrhages, especially if grafted on a bad heredity, exhausting labor and the drain of lactation are the most common causes. The attack may be developed by a violent psychic shock, such as the death of husband or child."

Tweedy & Wrench, of Dublin, give us nine subsidiary causes—drink, toxemia, post eclampsia, acute pain (the perineal stage), sepsis, severe hemorrhage, prolonged lactation, no marriage and heredity, laying emphasis on sepsis and hemorrhage in the puerperium.

Edgar says that "there is no doubt that the presence of puerperal sepsis in many of the cases is something more than a coincidence. Alienists assure us that since the introduction of antiseptics into midwifery the frequency of puerperal insanity has been marvelously diminished. Many cases of this type of psychoses are said to exhibit more the nature of delirium—such as is seen, for instance, in typhoid fever—than of actual insanity. Again, the coincidence of severe local infection has often been remarked, and gives color to the toxic theory; while a further coincidence of insanity of the puerperium with puerperal mastitis, phlebitis, and other inflammations remote from the genitals helps the assumption of this point of view. Of other special contributory

factors may be mentioned the exhaustion which follows delivery, extreme prostration being a well-known cause of certain psychoses or of low delirium. In this connection should be mentioned the influence of post-partum hemorrhage. In women already disposed to insanity the physiological adjustment which follows childbirth is doubtless sufficient to set up mental disorder. Other conditions which excite puerperal psychoses are the painful emotions.

Lewis, of Chicago, who, we must remember, does not call this a medical entity, says: "The inciting factor of insanity arising during the puerperal period are due, in from 70-80 per cent of the cases to either toxemia or infection. In the remainder no exciting cause beyond the general disturbance due to the bodily state can be assigned, * * * . The insanity arising in the lactation period is essentially due to exhaustion and inanition," occurring in women of the poorer, harder working, more improperly fed classes. "General weakness from other causes, such as may follow severe post-partum hemorrhage or recovery from septic infection, may be the exciting element."

Before we close the subject of its occurrence and cause, let us consider the illegitimacy and the number of the pregnancy, etc. Of 203 strictly puerperal cases collected by Jones, of London, about 10 per cent were single and 33 per cent were primiparal. One patient had an attack of insanity after each of her twelve children and another with each of nine, both becoming subject to chronic incurable insanity at the climateric. In lactation cases the insanity did not commonly follow a first confinement, but appeared to be due to the strain of frequent pregnancies and the exhaustion of long continued nursing. Puerperal insanity is most common between twenty-five and twenty-eight; lactational between thirty and thirty-four.

Jones also gives data pro and con as to the causation of this condition. One of his investigators found always negative blood cultures while others have found, as did Williams, streptococci, staphylococci, and the colon bacilli. It was

rare for any of his cases to have fever and some were admitted as early as the second day. He also noted in some cases the signs of endo-toxin development. But he asks, "If these cases be toxic (and he means either chemical or bacterial), how is it that insanity occurs most often after the first confinement?"

Before we proceed to the subject of symptoms and pathology, let me suggest these conclusions: Our disease is decreasing in frequency, as all evidence shows us. We coincidentally are increasing our aseptic technique and obstetric skill and we are continually recognizing the different types of toxemias both bacterial and chemical, more quickly, with resultant more rapid institution of treatment. On the other hand the strong mental shock and emotions that come to women in connection with, or as a coincidence to, childbirth are getting no less in this world of ours and I feel that we must all agree that sepsis and toxemia in the puerperal and anæmia in the lactational types of insanity are our real causes:—the emotional factors being secondary or only the exciting causes in the majority of cases. The other cases are, however, those of lability of the mental and nervous systems of probable types and with the same exciting causes.

The pathology of many morbid mental states is, I am sure, poorly defined and not well worked out. Jones, in his very exhaustive, though hardly recent article in 1903, gives us, however, very suggestive thoughts on the subject. "Immediately after confinement the morbid and effete material which is taken into the maternal circulation during early uterine involution, must tend to produce in the predisposed a profound irritation of the nervous system, and especially so should secretion and excretion be modified by interference, chemical or bacterial, with the normal functions of the venous, lymphatic and other excretory organs." It is in the early stage of puerperium, the stage of septic infection, and by that I mean all bacterial disturbances, that the most violent delirium occurs.

The lactational type shows impoverished blood supply, uterine sub-involution, and general cachectic condition.

SYMPTOMS.

Williams has found that the puerperal psychoses are usually characterized by great excitement during the first few days, associated with all sorts of hallucinations. Later, the maniacal symptoms disappear and the patient passes into a condition of depression with frequently suicidal tendencies.

Lewis has found that there are seldom any prodromal, usually of sight and sound, and great motor and mental excitement, appear; later motor agitation, subsultus, expressions of fear and uneasiness. Toxic cases are similar, but not so severe. Progress toward recovery is gradual—hallucinations disappear and lucid intervals occur. Lactational cases come on slowly, hallucinations at first few and later more constant; not a type of melancholia, but a mild, exalted mania, with frequently suicidal tendencies.

Hirst's cases have been of mania, melancholia or profound lethargy, stupidity and mental confusion, and Webster's experience has been about the same.

Edgar feels that while most of the cases have been classed as mania, they are in reality hallucinatory insanity.

De Lee has found melancholia with suicidal intent most common, but has also observed mania with infanticidal tendencies, while Vinay holds that the maniacal forms are the most frequent.

Tweedy & Wrench have found that insanity of the puerperium is always associated with either severe anæmia from hemorrhage or with sepsis. The patient is first irritable and uneasy about unknown dangers. She had a headache, is constipated, she may refuse food or to see her child or husband, and sleeps badly, and finally becomes definitely maniacal and may have suicidal tendencies. During lactation the patient becomes gloomy, sleeps badly, and is constipated. Definite melancholia develops with delusions and suicidal tendencies.

PROGNOSIS.

All authorities disagree markedly on this most important aspect. Williams tells that the progress is three to six months and if longer the prospect is very poor, 20-40 per cent fail to regain mental equilibrium and 5-10 per cent die, this high mortality due, he feels, to the underlying infection and not the mental derangement itself, and with these figures Hirst is in practical accord.

Lewis tells us 25 per cent of the infection cases die, but the progress of toxic cases is not so bad. Death occurs usually from sepsis or the exhaustion on account of the motor excitement. Lactational cases recover in 50 per cent, and they take eight to nine months.

Webster quotes from Clouston of Edinburg that 75 per cent of his cases have recovered; one-half of those in three months and 90 per cent in six months, and occasionally recovery takes place after years of impaired mentality and, surprisingly, he states that there is probably a larger number of recoveries in acute and severe cases than in mild ones. Dr. Lee states that the prognosis is fair—recovery in the majority of cases in from six weeks to six months.

Edgar tells us that exhaustion is the usual cause of death but recovery is the rule even from the insanity; if not, it goes on to a terminal dementia or paranoia. A high pulse rate is a bad sign.

Berry Hart says the prognosis is good under proper treatment and the return of menstruation is such a good sign that emmenagogues should be employed.

Tweedy & Wrench say some 60 per cent of all cases recover, but if, as the patient gets fatter and stronger the mind does not improve, the prognosis is bad.

In the subject of treatment our authorities again differ, but not in the usual way. Webster briefly dismisses it with advising an asylum, as does Hirst, except in cases of refusal of families or friends to commit the patient, when general symptomatic treatment is necessary. Edgar and De Lee both are no more explicit. Berry Hart with his regard for

the return of menstruation, says when the patient gains weight to use hot sitz baths, aloes and iron pills and binocide of manganese two grains in pills thrice daily should be administered. In lactational insanity immediate weaning of the baby is indicated. Williams feels that it is a good deal of an obstetric problem because of its presumably infective causes and we must search for the underlying etiologic factor for the cause. The symptomatic treatment he refers to only generally and suggests, if immediate improvement is not seen, to refer to a psychiatrist.

Tweedy & Wrench logically prescribe rest, food, excretion, and exercise as the key notes of prevention and cure. When the attack is established, use forty grains of bromide and ten of chloral every two hours. With acute mania, hyoscine is the best stand-by.

Lewis of Chicago gives many practical suggestions.

The deduction and conclusions that we may draw from this summary of the literature and from our own experience are these:

First: We have a definite clinical entity.

Second: Its etiology is in a great number of cases toxic, either bacterial or chemical, except in the lactational type which is one of general impoverishment of the body from prolonged nursing.

Third: It occurs in about one in 2,000 labors at present and it causes about 6 per cent of all insanity in the female.

Fourth: Its types, which I am poorly equipped to discuss technically, I will group briefly as manias and melancholias. At first thought we would expect the former to be the strictly puerperal type, and the latter the lactational and in general this classification is correct.

Fifth: Symptoms of the former have a more or less sudden onset frequently preceded by a febrile disturbance and a pulse that either fails to fall as the temperature does or even climbs higher. There may or may not have been foul lochia previously. The onset is characterized by hallu-

cinations, sexual and religious excitement, suicidal and infanticidal promptings, the latter more common in the lactational type.

Sixth: The prognosis is fairly good and as time goes on is improving, especially for the class of cases due to infections or intoxications.

Seventh: Treatment will tax all our ingenuity. General bodily health must be closely watched. The cause of infections must be met on surgical principles, as in any other infection, and the emunctories must be carefully looked after in this class, and, in those of chemical origin, its particular cause must be run down and met, whether in liver, intestine or kidney.

Rest must be obtained in the proper way. Restraint without resistance must be used, a constant attendant rather than a straight jacket. Pleasant surroundings make for mental rest as well.

Food must be nutritious and easily assimilated and its elimination must be watched and the kidneys stimulated with all the means at our command.

Exercise to the point of stimulation, but not fatigue, is as necessary as in any disease.

Medication must be studied very thoroughly. Of the hypnotics, hyoscine is the best. The suggestion of Berry Hart as to the emmenagogues is well worth a trial.

In the lactational type, we have profound exhaustion to deal with, and rest, more than exercise, will be indicated, but the most important indication is immediate weaning for the mother's sake; while in the early puerperal type, weaning is indicated to remove from the mother all thoughts of the labor and also to avoid infanticide. If early improvement is not observed, a psychiatrist should be consulted and personally, I feel that a joint conduct of the case, particularly the early ones, of obstetrician and psychiatrist will give the most happy results to these unfortunates—*Long Island Medical Journal*.

Extracts from Home and Foreign Journals

SURGICAL

INDICATIONS FOR OPERATION IN EXOPHTHALMIC GOITER.

Prof. H. Starck states that among 450 cases of Basedow's disease observed in the last few years sixty-nine were operated on by prominent surgeons, nearly all of which had been seen by him before the operation. From his observations he concludes: 1. Operation effected a cure (*i. e.*, complete physical and mental restoration) in approximately 30 per cent, improvement in 35 to 40 per cent, while in the other cases it proved ineffective or was followed by a change for the worse. 2. The operative mortality was 9 per cent (6 deaths in sixty-nine cases). Kocher had a mortality of only 3.1 per cent; according to others, however, it is 12 per cent. 3. If the surgeon accepts the view that a persistent thymus is responsible for a fatal outcome, although no positive evidence is at hand, he must determine whether this gland be present before resorting to resection of the struma; if it is, ligation of the vessels or resection of the thymus is to be considered. 4. The choice of the anesthetic is of great importance as to the outcome of the operation. The Basedow's type with predominating nervous, myasthenic and psychic symptoms is best operated on under general anesthesia, the other cases under local anesthesia. 5. Operation is contraindicated in status lymphaticus; if it can not be avoided, a local anesthetic should be employed. 6. In many cases the operation only lays the foundation for successful internal treatment. 7. The most unfavorable time for operation is that of increasing intensity of the disease; the most favorable, the stage of latency, or arrest. 8. The most suitable cases for operation are those in which there is a "goiter heart;" also some cases with classical Basedow's symptoms.

Only slight success is to be expected in the presence of a nervous-myasthenic-psyche symptom complex with but moderate cardiovascular symptoms. 9. The size of the goiter as determined by palpation is no criterion as regards the question of operation. Small, soft goiters are often of greater significance than large, firm ones. 10. The blood picture also is of no importance in considering the operative treatment, since it is not materially influenced by operation. —*The International Journal of Surgery.*

ACUTE APPENDICITIS.

John B. Deaver says the important points that have to be learned about this disease are that it is the most common intra-abdominal inflammation; that indigestion is often a forerunner, preparing the soil for the infection; that being an infectious disease and the most common infectious disease of the abdominal cavity, the appendix constitutes the avenue by way of which infection most commonly invades the upper abdomen. He considers acute appendicitis from the anatomical, etiological, bacteriological, and pathological standpoints; the points of the latter touched upon chiefly are in connection with peritonitis and abscess. The portions of the peritoneum most susceptible to infection are the diaphragmatic and enteronic. The differential points between a diffuse and a localized peritonitis are that in the former the pain is greater, the abdominal breathing more restricted and the rigidity and tenderness embrace a greater area of the overlying abdominal wall; upon auscultation the peristaltic waves are heard over a greater area and the abdominal breathing is less marked in the diffuse than in the localizing variety. In the early stages the tenderness and rigidity are best elicited by slight pressure. If the symptoms and signs, namely, pain, vomiting, fever, tenderness, and rigidity are interrupted, the diagnosis of acute appendicitis may be considered doubtful. Leucocytosis is of value as a confirmatory symptom when the patient reacts well to

the infection. The most important point in the differential diagnosis is the distinction between acute cholecystitis and acute appendicitis. Acute pancreatitis, perforated ulcer, or perforated gall bladder, present symptoms so much more intense than those of acute appendicitis that they should not give rise to confusion. As to the treatment, the writer states most emphatically that in all cases of acute abdominal pain nothing in the shape of a purgative or aperient medicine should be given until the cause of the pain is understood. In his experience purgatives play the greatest amount of havoc in acute abdominal conditions; 90 per cent of cases of perforating peritonitis have been purged. In the presence of peritonitis and in the absence of operation the patient should be set up in bed, given nothing by mouth, not even cracked ice; he should be given enteroclysis by the Murphy method and have an icebag over the site of rigidity and tenderness; the icebag is useful to prevent the doctor from making too many examinations and for its local anesthetic affect. The idea that it has any effect in controlling inflammation is fallacious. In diffuse peritonitis, in the absence of peristalsis and of a definite point of localization, it is the writer's practice to defer operation until the peritonitis becomes a localized or localizing one. The principles of anatomical and physiological rest, assisting the functions of the peritoneum, absorption and exudation, are defeated by any treatment other than the foregoing.—*Medical Record*.

EFFECT OF PHLORIDZIN ON TUMORS.

In the experiments cited by Wood and McLean the animals were injected with phloridzin in suspension in olive oil. Treatment was begun, as a rule, seventeen days after inoculation. All treated animals were kept rigidly on a diet of meat and lard, while the control animals were given the regular laboratory diet of dry bread and vegetable. From time to time, at the end of the second or third day period following injections of the phloridzin, the collected urines were

examined for sugar with Fehling's solution and were found to give a positive reaction in the case of the treated animals on the carbohydrate-free diet, while the urine of the untreated animals as well as a phloridzin solution gave a negative reaction. The animals under treatment rapidly became emaciated, the fur roughened, and they appeared to be very ill; a great many died soon after beginning of the treatment. For the experiments with the Buffalo rat sarcoma, 324 animals were inoculated, with 90.4 per cent of "takes." For the experiments with mouse sarcoma No. 396 mice were inoculated, with 97.7 per cent positive. Among the mice bearing spontaneous tumors and Crocker Fund mouse sarcoma No. 180, there were no cases of absorption of the tumor under treatment. The Buffalo rat sarcoma showed a much smaller percentage of absorption among the treated animals than among the controls, 37 per cent as compared with 58.4 per cent. In the majority of the experiments the growth among the treated animals was much more vigorous than that among the controls. Considering the very great variability of growth of the Buffalo rat sarcoma, as well as the high percentage of cases of spontaneous absorption occurring constantly, but with a great irregularity in different series of animals, the futility of using this tumor for therapeutic experiments or of basing conclusions on such investigations, is at once evident. Any "cures" obtained in work with the Buffalo rat sarcoma must be ascribed to spontaneous absorption rather than to the effect of the therapeutic agent.—*The Journal of the Amer. Med. Asso.*

DIAGNOSIS OF EXTENT OF INJURY IN CASES OF ABDOMINAL WOUNDS.

Kausch has found that it is impossible to determine whether or not the intestines or other viscera have been injured, by the discovery of free air in the abdominal cavity. This is an almost certain sign of perforation, according to his experience, which has been wide and varied. The army

corps to which he is consulting surgeon has served in turn in Belgium and France, Alsac, Galicia, Russian Poland and Serbia. A very small incision will reveal whether there is free air in the abdominal cavity. He makes the exploratory buttonhole for the purpose in the epigastrium under local or general anesthesia. The thicker the abdominal wall, the longer the incision, from 1 to 3 cm. The peritoneum need be only punctured; a pinhead hole is enough. If air streams out, he proceeds at once to a regular laparotomy. If not, the patient is spared a major operation for the time being at least. He has had cases in which a bullet passed through the abdomen, front and rear, without perforating the gastro-intestinal tract. When there was perforation, death was inevitable without operative relief, and he is convinced that his prompt operating saved a certain proportion of such cases. No one was ever harmed by the operation after an abdominal wound. Kausch was kept informed by telephone where fighting was under way, so that he was on the spot, ready to operate, before the wounded began to come in.—
The Journal of the Amer. Med. Assn.

MEDICAL

DIPHTHERIA CARRIERS.

A recent investigation of diphtheria carriers in Detroit is reported by Goldberger, Williams and Hachtel, in Bulletin No. 101, of the Hygienic Laboratories, of the United States Public Health Service. The problem of diphtheria carriers has become one of considerable importance and has been given special prominence of recent years by the studies of von Scholly, Moss, and Nuttall and Graham Smith. The writers of the report mentioned above studied 4,093 people in the city of Detroit, and found that 0.928 per cent harbored bacilli identical morphologically with the Klebs-Loeffler bacillus. This figure is rather lower than those of some other

investigators, but would indicate, as stated by the writers, that there were from 5,000 to 6,000 diphtheria carriers in the city of Detroit.

Of nineteen cultures isolated from nineteen of the carriers, only two were virulent, which would indicate that only 0.097 per cent of the people examined carried organisms capable of producing disease. An interesting further point is that the bacillus *Hoffmanii* was present in at least 41.9 per cent of over 2,000 individuals examined, and that the forty-nine cultures morphologically identified as bacillus *Hoffmanii* were avirulent. This would confirm the impression gained, we believe, by most experienced laboratory workers, that a true *Hoffmanii* can be distinguished with considerable certainty from a Klebs-Loeffler bacillus by morphological examination alone, and that its significance is probably that of a frequently present saprophyte of the throat and pharynx. The studies of Goldberger, Williams and Hatchtel also indicate that in examining for diphtheria carriers, it is best not to confine oneself either to the nose or throat, but that cultures should be taken from both places in every case. *The Journal of Laboratory and Clinical Medicine.*

INJURIES FROM HOT WATER BOTTLE.

In an action against a sanatorium and its superintendent it appeared that the plaintiff had employed the superintendent to perform an operation for hernia. After the operation was performed the doctor carried the plaintiff to the room assigned to him and placed him in bed while still under the influence of an anesthetic. A rubber bottle, filled with very hot water, had been placed in the bed, and the unconscious man was laid upon it, and was burned on his back severely. The witnesses described the wound as being 15 to 18 inches in diameter. He also received a smaller burn on his side; the attendants, believing that his struggles on becoming conscious were due to delirium, having held him down on the bed for a time and then turned him on his side. He was

under treatment from the burns for a number of months and suffered excruciating pain. The jury found the doctor, but not the sanatorium, guilty, and rendered a verdict for \$5,000, which the trial court reduced to \$2,500. On appeal, the court said that it did not mean to condemn the doctor, nor even to say that he was in fact negligent; but, taking the situation as it found it, and as the jury observed it, there was evidence to justify them in finding that the doctor had not exercised proper care; and, having so found, the court had no right to dispute the verdict. It also held that the damages awarded were not excessive.—*Grosshart v. Shaffer*, Oklahoma Supreme Court, 152 Pac. 441.—*Medical Record*.

HEART INHIBITION DURING VOMITING.

Gam says that while experimenting on intrathoracic and intra-abdominal pressures, the blood pressure was observed to fall during vomiting. A series of experiments were performed to determine the cause of this fall. In all experiments the blood pressure, the intrathoracic pressure and the movements of the abdominal wall were recorded. Vomiting was induced in some cases by means of apomorphin; in others by filling the stomach with hot salt solution, hot soap suds, copper sulphate solution, etc. In every case a high negative pressure was observed in the thorax during the act. The pressure would fluctuate rapidly from zero to twenty-five or thirty centimeters (water) of negative pressure. The blood pressure, however, always fell, sometimes to less than half its former level. The fall in blood pressure was found to be due to a vagus inhibition of the heart, for on cutting the vagi while the vomiting was taking place, and while the blood pressure was at its lowest, there was an immediate increase in heart rate and rise to above the normal in blood pressure. Furthermore, when the vomiting was induced after the vagi had been cut, there was a rise instead of a fall in blood pressure.—*The Journal of the Amer. Med. Asso.*

HOME TREATMENT OF SCIATICA.

Pöppelmann suggests the following method for the home treatment of sciatica. A pail of boiling water is placed in a tub large enough to permit an old chair to be set in it. A tablespoonful of ol. pini sylvestris is poured into the boiling water, the patient seated on the chair with his feet outside the tub, and two sheets pinned around his neck, so that they reach the floor on all sides, covering him completely but leaving the head free. In this steam bath the patient is allowed to remain for twenty minutes. He is then rubbed briskly with a cold wet cloth, dried and put to bed for an hour. If necessary, especially with elderly people, cold applications may be made to the head during the process of steaming. Internally, iodides are given, preferably iodine-vasogen, 7-8 drops three times daily. The bowels must be kept freely open. The baths are given every other day, and five to fifteen sittings are required for a cure. In the author's hands a successful outcome has been practically uniform.—*Critic and Guide*.

USE OF CAFFEIN IN DIGITALIS ARRHYTHMIAS.

In the *American Journal of the Medical Sciences* for September, 1915, Barton asserts that all the irregularities of the heart-beat which are brought about by digitalis tend to be removed by caffeine. Although in many cases digitalis arrhythmia will spontaneously disappear when the drug is stopped, instances arise, unfortunately too common, in which after prolonged digitalis administration the conductive system is so depressed that serious results may arise. Under these circumstances the administration of caffeine will be of service and is therefore strongly indicated. The action appears to be due to the increase in irritability of the conduction system produced by the caffeine, which antagonizes and finally overcomes the depressing effects which digitalis

exerts upon the auriculo-ventricular bundle.—*The Therapeutic Gazette*.

THE EFFECT OF CAFFEINE UPON THE BLOOD-FLOW IN NORMAL HUMAN SUBJECTS.

The *Journal of Pharmacology and Experimental Therapeutics*, for November, 1915, contains a report of a research by Means and Newburgh in which they report experiments upon the bloodflow of two normal subjects during rest, and of one subject during muscular work.

The action of caffeine on the blood-flow was studied in both subjects while at rest, and in one during work.

The average blood-flow of the two subjects at rest was 4.5 and 4.0 liters per minute; the systolic outputs were 61 and 57 cc.; the coefficients of utilization of the oxygen-carrying capacity of the blood were 31 per cent and 41 per cent.

With increasing work a steady rise in blood-flow, oxygen absorption, and pulmonary ventilation was found. The increase in blood-flow was produced first by an increase in systolic output until a maximum of 118 cc. was reached, beyond that by an increase in pulse-rate. This suggested that the supply of venous blood in this subject becomes "adequate" at about 640 kg. meters of work per minute. The coefficient of utilization showed a slight rise during work, indicating a slightly greater economy of the circulation.

After giving caffeine during rest, or when the supply of venous blood is "inadequate," evidence of drug action was found with both subjects. This action consisted in an increase in total blood-flow without a corresponding increase in oxygen absorption, and hence a decreased coefficient of utilization of the oxygen-carrying capacity of the blood. The pulse-rate was unchanged. Consequently the systolic output was increased.

During work probably no other action was obtained from caffeine than possibly an increase in pulse-rate, and consequently slight diminution in systolic output.

It is suggested that during rest when the supply of blood to the right heart is "inadequate", caffeine increases the blood-flow by increasing the venous supply through an action upon some mechanism outside the heart. When the supply becomes "adequate" or approaches adequacy, no such action is obtained.—*The Therapeutic Gazette*.

OBSTETRICAL

DIURESIS AND MILK FLOW.

There are observations on record which indicate that the secretion of milk may be influenced by a contemporaneous diuresis. Precisely what changes in the composition of the milk may be initiated in this way had not been determined until recently, when the question of the influence of specific diuretics on milk flow was investigated by Steenbock at the University of Wisconsin. He remarks that in view of the importance which heretofore unknown constituents of diets and rations have lately assumed, it is of the greatest interest to dissect the various factors normally operative in the body under ordinary conditions of diet. Steenbock found that urea, for example, administered in a diuretic dose, is able to decrease temporarily the flow of milk. On repeated administration, however, the increased intake of water which follows the impoverishment of the tissues with respect to water content balances the draft for water imposed by the diuretic, and the milk secretion comes back to normal. Other diuretic salts, like sodium chlorid, may be entirely unable to depress the milk secretion under normal circumstances, because they call forth a compensating thirst which simultaneously increases the water intake. In cases in which diuresis does lead to temporarily decreased flow of milk, the percentage of solids in the secretion is ordinarily increased, the fat being the principal variable. In ordinary experience, however, the composition of the milk may be regarded as

essentially unaltered by slight variations in renal activity.—
The Journal of the American Med. Asso.

INDICATIONS AND CONTRAINDICATIONS FOR ABDOMINAL SECTION.

Dr. Ross McPherson (*Provid. Med. Jour.*) summarizes his views in the following conclusions: First Cesarean section is a very useful operation for removing the child from a pregnant woman at or near term in cases: (a) where there is a relative disproportion between the birth canal and the fetus, sufficiently large to make the birth difficult or impossible; (b) in cases of serious obstruction due to tumors, or deformities congenital or acquired; (c) a certain number of cases of placenta previa, convulsive toxemia, or occasionally organic disease. Second. The operation should not be decided upon except by a person whose training and experience in pelvic and abdominal examination is sufficiently large to warrant the acceptance of his judgment. Third. The operation should not be performed by anyone unless he be a skillful abdominal surgeon, preferably one who has given particular thought and attention to this subject. Fourth. A long labor, much handling and manipulation, especially in the presence of ruptured membranes, predispose the patient to infection of the peritoneal cavity, and fifth, therefore, intraperitoneal abdominal Cesarean section should not be undertaken under those conditions, with one exception, namely when the religious prejudices of the family demand the saving of the child at the expense of the mother, and then only in the presence of and with the advice of a consultant and a clergyman, after carefully explaining the situation to the family and obtaining their written consent to the procedure. Sixth. If the above demands and conditions are fulfilled the maternal mortality should be practically nothing, the morbidity negligible, the end result perfect, and with the exception of those cases undertaken solely in the interest of the mother, every child should be born alive.—*Medical Progress.*

TREATMENT OF OPHTHALMIA NEONATORUM.

G. A. Neuffer, in the *Journal of the South Carolina Medical Association* for February, 1915, states that he has met with universal success in this condition by means of the following treatment: A sixty-grain (4 gram) to the ounce (30 c.c.) solution of silver nitrate is at once applied to the conjunctiva and immediately precipitated with a solution of sodium chloride made by dissolving one teaspoonful of the salt in a glassful of water. This application is repeated once every twenty-four hours, until one is satisfied that the disease has been controlled. Only in extreme cases are more than two applications necessary, and often one proves sufficient. In addition, an ounce (30 grams) of boric acid is ordered dissolved in a quart (litre) of hot water and the solution kept constantly warm. With this the nurse or mother is instructed to wash out the eyes as often as any pus collects, even if this is required a hundred times a day. One drop of a one per cent solution of an organic silver preparation is dropped into each eye three times a day as long as there is any pus; after this an astringent lotion is substituted. The author also has squares of lint kept on a block of ice and applied constantly, with frequent renewals, for forty minutes in each hour. The treatment described should be applied both day and night until the condition has been mastered.—*New York Medical Journal*.

Editorial

PUBLISHER'S NOTICE—The Journal is published in monthly numbers of 48 pages at \$1.00 a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money order, draft, or registered letter, should be addressed to the Business manager, C. S. Briggs, M. D., corner Summer and Union Streets, Nashville, Tenn.

All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

SLOW DISSEMINATION OF KNOWLEDGE.

Charles Darwin, in his "Descent of Man," published in 1871, writes thus of the appendix: "It is occasionally quite absent, or again is largely developed. The passage is sometimes completely closed for half or two-thirds of its length, with the terminal part consisting of a flattened solid expansion. In the orang this appendage is long and convoluted: in man it arises from the end of the short cecum, and is commonly from four to five inches in length, being only about the third of an inch in diameter. Not only is it useless, but it is sometimes the cause of death, of which fact I have lately heard two instances: this is due to small, hard bodies, such as seeds, entering the passage, and causing inflammation."

But Darwin was not the first to recognize the uselessness and danger of the appendix, since M. C. Martins, in *Revue des Deux Mondes*," which was published in 1862, mentioned the fact that this rudiment sometimes caused death. Indeed it is said the ancient Egyptians knew the appendix became inflamed and caused death, but for this we can not vouch.

In spite of these *hints* of Martin and Darwin, physicians called the symptom syndrome of what is now known to be appendicitis, typhlitis or perityphlitis for years, although the cecum itself is seldom inflamed without some pathological change in the appendix. The latter structure, how-

ever, is often very badly diseased while the cecum is perfectly normal.

The first methodical operation for appendicitis was performed in 1886 by Reginald Fitz, and even today it is sometimes hard to persuade a patient to have this structure removed simply because recovery often occurs without operation.

EUGENICS.

The same author, Charles Darwin, in the same book, writes as follows: "Man scans with scrupulous care the character and pedigree of his horses, cattle, and dogs before he matches them; but when he comes to his own marriage he rarely, or never takes any such care. He is impelled by nearly the same motives as the lower animals, when they are left to their own free choice, though he is in so far superior to them that he highly values mental charms and virtues. On the other hand he is strongly attracted by mere wealth or rank. Yet he might, by selection, do something not only for the bodily constitution and frame of his offspring, but for their intellectual and moral qualities. Both sexes ought to refrain from marriage if they are in any marked degree inferior in body or mind; but such hopes are Utopian and will never be even partially realized until the laws of inheritance are thoroughly known. Everyone does good service who aids toward this end. When the principles of breeding and inheritance are better understood, we shall not hear ignorant members of our legislature rejecting with scorn a plan for ascertaining whether or not consanguineous marriages are injurious to man."

Though the above was written thirty-five years ago, little real progress has been made in eugenics. It is true we have laws against miscegenation and against certain consanguineous marriages; some States have passed and other States have attempted to pass, laws making certificates of health necessary before marriage licenses can be issued; if we mistake not, in some States the habitual criminal is unsexed, and in many States this question has been discussed, but

ignorance in regard to the laws of heredity is still the rule and not the exception.

Wealth and social position, rather than health and intellectuality, determine as many marriages today as when Darwin wrote, and America's highest legislative body has not yet repealed the law against the dissemination of knowledge of means to prevent conception. Yet too many children in poor families not only means dire poverty and unhappiness instead of comfort and happiness, but oftentimes desertion, divorce, forced immorality or crime. It is just as necessary to be able to limit the number of children so that each will at least get a good start in life as it is to bring healthy children into the world, since healthy children can not remain healthy and develop as well under unfavorable as under favorable conditions.

Did the law affect rich and poor alike it would not be so pernicious, but such is not the case, since the largest families in this country are found among the poor and ignorant, the very ones who can least afford to have many dependents. Without being so intended, it is class legislation. The healthy, well nourished and well educated class escapes, the poor, ill-nourished, and ignorant class bears the burden until this burden is shifted on society in the form of beggar, defective, imbecile or criminal.

If all the members of Congress made a tour of the tenement districts of New York or other large cities, saw the overworked fathers and overbred mothers, the ragged, ill-nourished and oftentimes diseased children, inquired into the total earnings of the family and the necessary expenses, ate of their bread and breathed their air, if our congressmen did this, then the fate of the law as it now stands would be sealed. But our congressmen are not going to make any such tour, they are not even going to inform themselves by study of the actual conditions, but will do something far easier by voting an appropriation for the study of hog cholera, the foot and mouth disease of cattle, the Texas cattle tick or some other measure of more apparent benefit to the

people—and the congressman. To vote on appropriations like the above can not weaken the legislator, to vote to repeal the present law might lose him a large following in some communities. Yet the repeal of the present law in regard to preventives is the first step in eugenics, and without the repeal the best efforts of the best men and women will accomplish but little.—*W. T. B.*

PUBLIC HEALTH SERVICE HOSPITALS CURB TRACHOMA.

The establishing of small trachoma hospitals in localities where this contagious disease of the eyes is prevalent presents the best solution of the trachoma problem, according to the statement contained in the annual report of the Surgeon General of the United States Public Health Service. The Service now has five trachoma hospitals in the three States of Kentucky, Virginia, and West Virginia, and so great has been the number of applicants for treatment that a waiting list has been established. In the past fiscal year 12,000 cases of trachoma have been treated, the larger proportion of which were cured, while those in which a cure was not effected have been greatly improved and rendered harmless to their associates. The great majority of these trachoma patients were people who lived in remote sections far removed from medical assistance, and who, but for the hospital care and treatment provided would have remained victims of the disease practically the remainder of their lives.

“When it is considered,” the report of the Service states, “that thousands of persons suffering with trachoma, a dangerous contagious disease, would otherwise remain untreated, it is realized how farreaching results have been obtained through these trachoma hospitals and the other public health work done in this connection. It would be impossible to estimate with any degree of accuracy the number of people who have been saved from contracting this communicable disease by thus removing these thousands of foci of infection.”

In addition to treating persons with the disease the hospitals have been used for educational work. Doctors and nurses have visited the homes of the patients and have explained how to prevent the development and recurrence of the disease. One thousand three hundred and eight such visits were made during the year in Kentucky alone. "It has taken some time," the report continues, "to educate the people afflicted with this disease to the importance of cleanliness and the use of simple hygienic measures in their daily life." That results have been obtained is evidenced by the noticeably better observance of hygienic precautions by those among whom the work has been done.

In addition to the hospital work, surveys were made in sixteen counties in Kentucky, especially among school children. Eighteen thousand and sixteen people were examined, 7 per cent being found to have trachoma. Similar inspections in certain localities of Arizona, Alabama, and Florida resulted in finding the disease present in from three to six children out of every hundred. Periodic examination of school children for the disease and the exclusion of the afflicted from the public schools, are two of the recommendations the Public Health Service lays emphasis upon.

One of the special features of the trachoma work was the giving of lectures and clinics before medical societies in various counties where trachoma hospitals could not be established. Patients were operated upon in the presence of physicians and the most modern methods of treatment demonstrated. Throughout, the purpose has been to stimulate local interest in taking up the campaign to eradicate trachoma.

HOW THE GOVERNMENT IS MEETING THE MALARIA PROBLEM.

Four per cent of the inhabitants of certain sections of the South have malaria. This estimate, based on the reporting of 204,881 cases during 1914, has led the United States Pub-

lic Health Service to give increased attention to the malaria problem, according to the annual report of the Surgeon General. Of 13,526 blood specimens examined by Government officers during the year, 1,797 showed malarial infection. The infection rate among white persons was above 8 per cent, and among colored persons 20 per cent. In two counties in the Yazoo Valley, forty out of every one hundred inhabitants presented evidence of the disease.

Striking as the above figures are they are not more remarkable than those relating to the reduction in the incidence of the disease following surveys of the Public Health Service at thirty-four places in nearly every State of the South. In some instances from an incidence of fifteen per cent, in 1914, a reduction has been accomplished to less than 4 or 5 per cent in 1915.

One of the important scientific discoveries made during the year was in regard to the continuance of the disease from season to season. Over 2,000 Anopheline mosquitos in malarious districts were dissected, during the early spring months, without finding a single infected insect, and not until May 15, 1915, was the first parasite in the body of a mosquito discovered. The Public Health Service, therefore, concludes that mosquitoes in the latitude of the southern states ordinarily do not carry the infection through the winter. This discovery indicates that protection from malaria may be secured by treating human carriers with quinine previous to the middle of May, thus preventing any infection from chronic sufferers reaching the mosquitoes and being transmitted by them to other persons.

Although quinine remains the best means of treating malaria, and is also of marked benefit in preventing infection, the eradication of the disease as a whole rests upon the destruction of the breeding places of Anopheline mosquitoes. The Public Health Service, therefore, is urging a definite campaign of draining standing water, the filling of low places, and the regrading and training of streams where malarial mosquitoes breed. The oiling of breeding places, and

the stocking of streams with top-feeding minnows, are further recommended. The Service also gives advice regarding screening, and other preventive measures as a part of the educational campaigns conducted in sections of infected territory.

This study is typical of the scientific investigations which are being carried out by the Public Health Service, all of which have a direct bearing on eradicating the disease. The malaria work now includes the collection of morbidity data, malaria surveys, demonstration work, scientific field and laboratory studies, educational campaigns, and special studies of impounded water and drainage projects.

Reviews and Book Notices

"Pellagra." By George M. Niles, M.D., Gastro-enterologist to the Georgia Baptist Hospital, Wesley Memorial Hospital and Atlanta Hospital, Atlanta, Ga. Octavo of 261 pages, illustrated. Philadelphia and London. W. B. Saunders Co., 1916. Cloth, \$3 net. W. B. Saunders Co., Philadelphia. London.

We are in receipt of the second edition of this work upon a subject that has of late attracted a great deal of attention from the profession. Pellagra has in recent years sprang up in an unaccountable manner, especially in the southern section of the United State, and it behooves every practicing physician to equip himself with such knowledge as will enable him to recognize the disease when encountered in his practice and to handle it in a scientific manner. This work in its second edition, although following the appearance of the first edition so closely has undergone many changes and had numerous additions so that it has been brought fully up with the present state of knowledge. The chapter on etiology contains the results of the recent investigations of Dr. Joseph Goldberger, Special U. S. Agent for the study of the disease, and Thompson-McFadden Commission on Pellagra. The work is that of a southern physician and should receive the warm support of southern physicians everywhere.

"A Practical Treatise on Infant Feeding and Allied Topics." For Physicians and Students. By Harry Lowenberg, A.M., M.D., Assistant Professor of Pediatrics, Medico-Chirurgical College of Philadelphia; Pediatricist to the Mt. Sinai Hospital; Pediatricist to the Jewish Hospital; Assistant Pediatricist to the Medico-Chirurgical Hospital and to the Philadelphia General Hospital; Formerly Instructor of Pediatrics, Jefferson Medical College. Illustrated with Sixty-four Text Engravings and Thirty Original Full Page Plates, Eleven of which are in color. Philadelphia. F. A. Davis Co., Publishers. English Depot. Stanley Phillips, London. 1916.

Our thanks are due the obliging publishers for a copy of this exceedingly valuable book. The author's long experience and intimate acquaintance with the subjects treated

of eminently qualify him to present a work that will prove of most valuable assistance to physician and students. The work is eminently practical and presents throughout the subject matter in an easily accessible form. The arrangement of the text is systematically perfect and only such material is used as may render the work available for the needs of practitioners and students. The importance of breast-feeding is emphasized and artificial alimentation discussed thoroughly so as to furnish the best schemes for obtaining the best results. The article upon "Surgical Treatment of Infantile Pyloric Obstruction" is by the celebrated surgeon, Dr. John B. Deaver, a chapter that adds much to the value of the work. A feature of the work is the presentation of a number of plates showing in colors the appearance of stools in various conditions of alimentary disturbances. We are greatly pleased with this work and can conscientiously recommend it to students and practitioners.

"Annual Report of the Surgeon General of the Public Health Service of the United States." For the Fiscal Year 1911. Washington. Government Printing Office. 1914.

This is the forty-third annual report of the operations of the Public Health Service, in the one hundred and sixteenth year of its existence, issued by the Surgeon General of the Public Health Service of the United States. This treats of the seven divisions of the bureau under the following heads, viz. (1) Scientific Research and Sanitation; (2) Foreign and Insular Quarantine and Immigration; (3) Domestic (Interstate) Quarantine; (4) Sanitary Reports and Statistics; (5) Marine Hospitals and Relief; (6) Personnel and Accounts; (7) Miscellaneous. The report contains a great deal of interest to the general reader, especially to those interested in sanitary matters, and shows the methodical and systematic manner in which the affairs of the bureau are administered.

Publisher's Department

"IN PARTICULAR CASES."

Therapeutic efficiency in the use of the bromides is often as dependent on the avoidance of untoward effects as on the attainments of maximum physiologic activity. For this reason Peacock's Bromides offer the most satisfactory bromide therapy, for not only does this happy combination of carefully selected bromide salts insure all the benefits of the most active bromide preparation, but it does so with the great advantage that gastric disturbance and all tendencies to bromism are reduced to a minimum. This is why in "particular cases" so many physicians are in the habit of insisting on the use of Peacock's Bromides.

Notwithstanding the large number of Hypophosphites on the market, it is quite difficult to obtain a uniform and reliable syrup. "Robinson's" is a highly elegant preparation, and possesses an advantage over some others, in that it holds the various salts, including iron, quinine, and strychnine, etc., in perfect solution, and is not liable to the formation of fungus growths. (See advertisement in this issue.)

"Many cases of acute coryza and naso-pharyngeal irritation are often due primarily to the streptococcus rheumaticus and respond to the usual rheumatic therapy."

In these cases commonly called "colds," generally deep-seated, painful and exhausting, Tongaline mitigates the congestion and by rapid elimination of the poison or germs, promptly relieves a condition often very obstinate and if not corrected within a reasonable time, attended with serious results and always with a tendency to become chronic.

For special stimulation to the kidneys, Tongaline and

Lithia Tablets; if malaria is indicated, Tongaline and Quinine Tablets.

NOT A DIGESTIVE SUBSTITUTE.

The amount of actual harm done with the best intention, by continually supplying the digestive organs with digestants, or ferments, instead of encouraging them to generate their own, is doubtless greater than we realize. It is not very often that one need order predigested food for a patient, although occasions may and do present themselves when this is advisable. But the indiscriminate use of pep-sins and similiar substances from the vegetable kingdom, in the management of many patients with weakened digestive powers, is scarcely to be justified. A much more useful remedy, because of its being a true stimulator to the digestive functions, gastric and intestinal, is Seng. This well known preparation contains the active principles of Panax (Ginseng), and is especially useful because it stimulates the physiologic activity of the digestive glands and thus "helps them to help themselves"—obviously the most desirable therapeutics in all functional cases. It should be remembered, therefore, that Seng is not a ferment to digest food which weakened organs can not care for in their natural manner. Instead, its action is to restore tone and vigor to the secretory structures so that they are able to evolve and supply their own ferments. Seng is a very agreeable remedy to take, and its benefits are manifested in surprisingly short order. In convalescence from fevers or diseases impairing the digestive functions it is unquestionably one of the most efficient remedies being used by medical men today.

INTEROL.

The world is full of fallacies—It is fed upon half truths. It drinks in sophistry and then wonder is expressed that the millenium is so long deferred.

Take for instance the unfortunat use of the terms "expensive" and "high-priced" or of "costly" and "cheap."

Price—be it high or low, is what one *pays*.

It has nothing to do with what is received.

Quality on the other hand, is what one gets, or fails to get. Service ditto.

A useless, or inferior article or service, even when bought for a low price, is expensive and costly!

On the other hand, the better or higher the Quality or the Service that is obtainable, the higher the price—which is a great natural law. Hence, high-priced should, and usually does men, high quality or service.

In fact, a moment's reflection will show that the impression created in the mind of a person of average intelligence, by the word "cheap" applied to a person or a thing, suggests inferiority.

A cheap person or thing is apt to prove the most expensive. A high-priced person or thing usually turns out to be the most economical.

And, it is a most important fact that this applies with especial force to therapeutic agents of any kind intended for use by the physician, and with fulminant emphasis to drugs or agents that have to be put into the human body.

The physician who hesitates or is influenced by "high price", provided he knows the reputation and standing of the parties marketing the product, is false to his obligation to himself and to his patient.

All of which applies with especial force to mineral oil and particularly to Interol.

NASHVILLE JOURNAL — OF — MEDICINE AND SURGERY

CHARLES S. BRIGGS, A.M., M.D., Editor.
W. T. BRIGGS, B.A., M.D., Associate Editor.

VOL. CX.

APRIL, 1916.

No. 4

Original Communications

PERFORATIONS IN TYPHOID FEVER.*

BY W. T. BRIGGS, M.D.,
Nashville, Tenn.

Postmortem Findings—In 6,819 autopsies held by various pathologists throughout the world, the percentage of perforations found was 13.4. The lowest percentage found in any one series was 5.7, the highest 29.5, the average 13.4. These figures mean that of every hundred persons dying of typhoid, about eight die from the effects of perforations if not from the shock of the perforation itself.

In 34,916 clinical cases the reports show that the average number of perforations noted was about 3.1 per cent.

The frequency of perforations varies from year to year. They occur oftener in the male sex, even when allowance is made for the greater incidence of this disease among males. The third decade is the commonest age and the third week the usual time. However, these facts really help us but little, except from an academic standpoint, since perforation may occur in the first or tenth week or even later; they may

*Read before Nashville Medical Symposium, February 3, 1916.

occur at any age and in either sex. Children, and those past fifty, escape this complication oftener than others.

In 605 cases the sites of perforation were as follows:

Ileum	506
Sigmoid flexure	57
Appendix	32
Meckel's diverticulum	4
Jejunum	4
Cecum	1
Rectum	1

The perforations in the ileum are usually close to the ileocecal valve. Usually there is only one perforation, but there may be more, as many as twenty-five having been found.

Symptoms—If the patient is extremely toxæmic there may be no immediate symptoms and the first evidence of a perforation may be the resulting peritonitis. Since the bath treatment usually helps keep the mind clear, it should be used in all typhoid cases were this its only advantage, and such we know is not the case. That baths are a cause of perforations, as maintained by some, has never been proven.

Providing the mental condition is clear, the first symptom in most cases is sudden, sharp, severe abdominal pain. This pain, after the first onset, usually becomes paroxysmal. It may be confined to the abdomen, especially the umbilical or right iliac regions, or in males it may be reflected to the penis. Along with this pain there may be irritability of the bladder, as manifested by frequent micturition. There may be nausea and vomiting, chills and sweats and a marked change in the faces, but these symptoms are not constant by any means. The temperature, pulse, and respiration may show no immediate change. If there is any change in the pulse and respiration it is apt to be an acceleration, and if there is any change in the temperature it is usually a slight rise followed in an hour or so by a fall.

The leucopenia, which has been present may change to a leucocytosis, and the latter may continue to rise from hour to hour, or it may increase at first and then show a rapid

decline. In some cases there is absolutely no change in the blood picture.

The blood pressure often increases synchronously with the perforation and in a few cases this rise has preceded all the other signs of perforation. At present this is one of the best means of differentiation between hemorrhage and perforation.

Of the above signs and symptoms, pain is the most constant, and even pain of a severe character is often absent because of the dull mental condition.

A careful examination of the abdomen is perhaps the best aid to correct diagnosis after all. By this examination we may be led to suspect perforation because of rigidity of the muscles, increasing distention, tenderness, localized muscle spasms, changes in the respiratory movements or loss or diminution of the area of hepatic dulness. To my mind the loss of the area of hepatic dulness is the most important of these signs, and it is the only one distinctive of a perforation, since the rigidity, localized muscle spasm, change in the respiratory movements may be caused by an appendicitis or complicating cholecystitis while the increasing distention is likely to point to a peritonitis, though of course the distention may be present even before perforation. Even the loss of the area of hepatic dulness is not always present, since perforations through portions of the intestinal walls not covered by peritoneum will not allow the gas to escape into the cavity, nor will gas escape into the general cavity if the perforation occurs in a section of intestine which is walled off by adhesions. Furthermore, the liver may be greatly atrophied or displaced, thereby allowing room for the transverse colon to slip between the ribs and liver. That distention of the transverse colon will cause the area of hepatic dulness to disappear, as maintained by many, seems unreasonable, since the space between the diaphragm and the superior surface of the liver is relatively small, and even granting that the transverse colon slips into this space while in a perfectly flaccid condition,

and later begins to distend, it would push itself out into the free cavity by its own distention. Even if all the intestines were greatly distended thereby, tending to lift the abdominal wall and the diaphragm from the liver, the latter organ would still keep close to the diaphragm because of the vacuum which helps hold it in position. The importance of the sign of the loss of the area of hepatic dulness in perforations of the intestines was stressed many years ago by Flint, and I believe it is as valuable today as at that time, and it is a sign we all should thoroughly try in every case where perforation is suspected.

Prognosis—It is unnecessary to say that the prognosis is extremely grave, but its gravity is modified by the general condition of the patient, the presence or absence of other complications and the delay or rapidity of the diagnosis and treatment.

Treatment—The treatment is prophylactic and operative. The prophylactic treatment consists in handling all typhoid patients until they have absolutely passed beyond the danger of perforation, as if perforation were imminent. Therefore the diet should be simple and the resumption of the usual work should be gradual, and all violent exercise should be interdicted until health is fully restored. To open the abdomen and use omental grafts over the thinned areas of the intestine when perforation seems imminent, as advocated by Solieri in Langenbeck's archives, would be radical prophylaxis to say the least, especially since it is hard enough to diagnose perforation, to say nothing of *imminent* perforation. Mikulitz, in 1884, performed the first operation for typhoid perforation. Since that time the operative treatment has come more and more into vogue until today it is the treatment in all cases except those who are practically moribund at the time of perforation. Unfortunately, many are in this condition when perforation occurs.

If operation offers any hope it should be done as soon after the perforation as possible. Morphine should be given to quiet peristalsis, a local anesthetic should be used in the

line of incision and the tissues infiltrated with this solution as encountered. For obvious reasons the incision should be median, and should be free enough to allow easy manipulation of the intestines. As the ileum is usually involved it should be examined first, then the sigmoid. Perforations should be closed with as few stitches as security demands, and areas where perforation seems likely to occur should be turned in. If there are several perforations close together it may be necessary to resect, but if the condition of the patient is desperate, the bowel should be brought into the wound and sutured there. Any foreign matter present should be removed by sponging, and the cavity should be drained with a tubular drain. After the operation the patient should be put in Fowler's position and the Murphy drip instituted.

THE PHYSICIAN IN INDUSTRY.

BY MAGNUS W. ALEXANDER.

In the early history of medical work in industry, the regular employment of a physician in an industrial establishment was usually considered an evidence of a largely benevolent attitude on the part of the employer. Whether or not this assumption was true, the results showed that the work of the physician in industry proved beneficial to the employer as well as to the employe, by protecting both against undue expense arising out of injury and sickness and by promoting a better mutual relationship. The results also proved that medical supervision of employes increased their efficiency, and that prompt medical and surgical treatment of injured and sick employes prolonged their lives and the period of their industrial usefulness. As these advantages became known among employers, medical supervision of employes was introduced into many plants, particularly into establishments where large numbers of workmen were employed.

The great value of the physician in industry became even more generally realized when workmen's compensation laws went into effect, which compelled the employer to shoulder the expense of injuries to employes regardless of the fault of either party. These laws forced the employer, in self-defense, not only to provide adequate medical and surgical treatment for employes injured in his establishment, but also to exert all reasonable effort for the prevention of future accidental injuries and for the elimination of working conditions that might prove harmful to the health of his employes. Experience, however, had shown that physique, temperament and general physical condition of employes affected to a large extent their liability to sickness or injury. Some men could safely do work that constantly required considerable physical effort, while the same work would cause discomfort and strain to other apparently strong men. Employes with defective vision would suffer

headache while doing work that required close application of their eyesight, while others with normal vision would naturally have no such trouble when similarly engaged. Contact with certain odors or liquids used in manufacturing processes would cause skin irritation or other disturbances to one person, while hundreds of others working under exactly the same conditions would be entirely unaffected.

These experiences naturally led the employer toward a study of the physical condition of his employes, in order to direct each of them into that kind of employment for which he would seem best suited by virtue of his physical fitness as well as his experience and skill; and *vice versa*, to divert him for an employment that might prove injurious to his health and safety. In order to pursue this course intelligently, physical examination of all prospective employes and periodical re-examination of all persons already employed became necessary. It is obvious that only a competent physician should be assigned to this task.

Aside from looking after the health of individual employes, the physician in industry also renders a valuable service by bringing to light those general conditions of employment that may adversely affect the health and comfort of all workmen in common. Many of these conditions would otherwise remain concealed and unremedied because their ill effects are of such gradual development that the lay executive or employe might not be able to detect their presence nor locate their source. By his co-operation with the employer and foremen in securing wholesome ventilation and proper lighting conditions, and by inducing employes, by personal advice or through suitable literature, to adopt healthful habits in the shop and home, the physician brings into play simple, far-reaching measures that tend to raise the health and therefore the efficiency standard of the entire working force.

THE TRAINING OF FIRST-AID MEN.

The physician also finds specific functions to perform, such as the training of an adequate number of persons in

each employment, so that they can themselves as laymen effectively treat slight wounds that do not demand a physician's service, or give temporary assistance in cases of serious injuries that need emergency attention pending a physicians arrival. The presence of such a body of first aid men is so much the more important when the industrial establishment is located at a considerable distance from the physicians office or dispensary, or when injuries occur when a physician is not immediately available.

With these many advantages in mind it is obvious that the physician has come into industry to stay. In a large plant he becomes part of the organization and devotes his entire time and effort to the welfare of its employes, while in smaller plants or in those where the work is practically free from hazard, he spends only a part of the day in the medical care of employes, or he combines a number of such plants under his medical supervision. Apart from the medical aspect, however, enlightened employers are beginning to see quite clearly the value of a physician as a staff member. They have learned to appreciate that his peculiar relationship to employes as a friendly medical advisor enables him to exert a wholesome influence upon their mental attitude as well as upon their physical welfare. It should therefore not be surprising to find in future physicians regularly attached to the organization of even small plants, where the medical supervision of employes alone would not be a task large enough to warrant the full time employment of a medical expert, but where his spare time may be used effectively in assisting the management in the general supervision of employes.

SPECIAL TASKS AND PROBLEMS.

The physician in industrial practice encounters a great many tasks and problems that do not arise ordinarily in private practice. He often finds himself dealing with a great number of people whose needs must be met promptly, effectively, and with a minimum expenditure of time. Many of these are unfamiliar with the English language and are

unable to make their needs and wishes understood or to understand the inquiries and directions of the physician who speaks English only; others are mentally backward and difficult to deal with on that account. Some are unclean and careless in their personal habits, thereby causing their wounds or ailments to improve only very slowly even under the best of care, while others have a generally antagonistic attitude. Some are even dishonest and try to conceal or falsify the real cause of an injury; they would rather feign inability to work and secure part pay while loafing, than perform honest work and gain full wages. Moreover, there are those who themselves believe or by some doctors are led to believe, that they are seriously injured and incapacitated for work when they are not. Yet the physician in industry must patiently and persistently cope with all these conditions in his endeavor to cure these people of their physical ailments and to disabuse them of their mental illusions.

The question of where the physician in industry should terminate his care of injured or sick employes and at what point an employe's private physician should assume such responsibility, is another problem that must be solved in a satisfactory way. What duties to delegate or not to delegate to the nurse employed in the establishment under his supervision; what instructions to give and what materials to furnish to laymen authorized to render first aid or emergency treatment to injured employes throughout the plant; how best to render some industrial operations free from the hazard of occupational disease, or how to protect workmen against such hazards if they can not be eliminated, are questions that he is called on to answer in an intelligent and practical manner.

In the solution of these and similar problems the physician in industry often finds himself in a quandary. Previous training and experience had made no specific provision for their solution; in fact, many of these problems have but recently become recognized. In most cases the physician in industry has been obliged to find an answer to each problem

practically alone and as best he could. Sometimes he has hit on a method that was only partially satisfactory; sometimes he has achieved results that were all that could be desired, while at other times he has failed in his aim. Occasionally, through a comparison of conditions and an interchange of experiences, physicians connected with industrial enterprises would reach common conclusions that would point to simple and practical remedies. The value of such informal conferences naturally led to a desire for a more systematic interchange of ideas extended over a larger group of physicians with medical problems in industry.

THE CONFERENCE BOARD OF PHYSICIANS.

A preliminary meeting of physicians engaged in industrial practice held in New York City on April 4, 1914, indicated that their varied knowledge and experience could be so combined and harmonized as to afford composite and definite conclusions that would be valuable to themselves and to the industries they represent. It was also felt that the findings could advantageously be made available to all physicians in industry to the end that employers and employees generally might reap benefit therefrom. The concrete outcome of this meeting was the organization of a "*Conference Board of Physicians in Industrial Practice*," the scope and work of which is embodied in the official declaration that

"The Conference Board of Physicians in Industrial Practice is organized for co-operative effort in introducing into industrial establishments the most effective measures for the treatment of injuries or ailments of employees; for promoting sanitary conditions in workshops; and for prevention of industrial diseases."

In launching this movement, the Conference Board on Safety and Sanitation* has been a helpful factor, and the

*The Conference Board on Safety and Sanitation is composed of national associations of employers, such as the National Founders' Association, the National Association of Manufacturers, the National Metal Trades Association, and the National Electric Light Association, who have pooled their efforts for industrial safety and sanitation.

two conference boards have since been working in close, harmonious relationship; that of business executives looking for professional advice in safeguarding the health of employes, and that of physicians offering medical judgment as the result of combined study and experience.

It was thought desirable to bring together at first only a relatively small number of medical officers of corporations, so as to facilitate their work and give their discussions a more intimate character. In order to insure regular attendance at the meetings, only corporations in the eastern section of the country were asked to join the conference board through their respective medical officers, but industrial representation was diversified as far as practicable. The physicians now constituting the board are all men of wide experience in their respective fields, who have gained a thorough understanding of the requirements of industry from the humane viewpoint and of the physical ability of men and women generally to meet these requirements. They are also familiar with the personal habits and the living and working conditions of people engaged in industry, and are therefore particularly competent to handle medical problems in industry.

Dr. John J. Moorhead, of New York City, the chief medical officer of the Interborough Rapid Transit Company and the New York Railways Company, is chairman of the conference board, and M. W. Alexander, of the General Electric Company, West Lynn, Mass., is the executive secretary. The present members of the board are: Dr. D. John Bowes, Philadelphia Electric Co., Philadelphia Electric Company, Philadelphia, Pa.; Dr. C. C. Burlingame, Cheney Bros., South Manchester, Conn.; Dr. W. Irving Clark, Norton Company, Worcester, Mass.; Dr. Royal S. Copeland, Consolidated Gas Company, New York City; Dr. G. M. Dorrance, Joseph Campbell Company, Camden, N. J.; Dr. E. H. Hanna Cadillac Motor Car Company, Detroit, Mich.; Dr. G. L. Howe, Eastman Kodak Company, Rochester, N. Y.; Dr. W. G. Hudson, E. I. DuPont DeNemours Powder Com-

pany, Wilmington, Del.; Dr. J. A. Jackson, New York Edison Co., New York City; Dr. Chas. A. Lauffer, Westinghouse Electric & Manufacturing Co., East Pittsburg, Pa.; Dr. Frederick W. Loughran, Medical Advisor, State Insurance Fund, New York City; Dr. D. B. Lowe, B. F. Goodrich Company, Akron, Ohio; Dr. John W. Luther, The New Jersey Zinc Co., New York City; Dr. A. C. Marshall, Powers-Weightman-Rosengarten Co., Philadelphia, Pa.; Dr. J. D. McGowan, Commonwealth Edison Company, Chicago, Ill.; Dr. John J. Moorhead, Interborough Rapid Transit Company, and New York Railways Co., New York City; Dr. Francis D. Patterson, Harrison Bros. & Co., Inc., The J. G. Brill Company, Electric Storage Battery Company, Philadelphia, Pa.; Dr. W. E. Ramsay, The American Smelting & Refining Co., Raritan Copper Works, Barbour Asphalt Paving Co., Perth Amboy, N. J.; Dr. L. M. Ryan, Hudson & Manhattan R. R. Co., The Foundation Co. of N. Y., New York City; Dr. F. E. Schubmehl, General Electric Co., West Lynn, Mass.; Dr. John Woodman, New York Edison Company, New York City; Dr. Randall Zimmerman, Westinghouse Air Brake Company, Wilmerding, Pa.

The companies represented by these physicians employ over 250,000 men and women, skilled and unskilled, of many languages and nationalities, and working both indoors and out in greatly diversified occupations.

The board meets periodically. So far eight meetings have been held and some important results have already been achieved; much other work of far-reaching character is now under consideration. The individual members of the board are actively co-operating in the prosecution of research work in respect to special problems which can be studied best in the particular industry with which they are connected. The results of individual investigations, however, are referred to the board for broad consideration and joint action.

INSTRUCTIONS TO LAYMEN FOR FIRST AID.

One of the first tasks assumed by the Board was the development of "Instructions to Laymen for First Aid Treatment

of Common Injuries and Disorders." It was the intention to issue instructions of such simple character that they could readily be followed by the ordinary man without even an elementary foundation of first aid knowledge. The instructions agreed upon by the Board are concise and pertinent; they stipulate what the layman should do, without wasting any words in stating the reasons for so doing. In an emergency treatment, loss of time by reading irrelevant matter may prove of serious consequence. The remedies referred to in the instructions are few, simple, and inexpensive and can be administered by laymen without danger of any harm. All medicaments, bandages, and other materials needed in carrying out the instructions, are readily obtainable in drug stores. The first aid instructions promulgated by the Board have been widely accepted; they have also been reprinted in the numerous technical journals in the United States and in other countries.

The Board also co-operated in a very practical way with the Conference Board on Safety and Sanitation in the development of the "*N. A. S. O. Standard First Aid Jar*," a compact, sanitary, and convenient first aid outfit consisting of a dust-proof glass jar in which first aid materials are contained in well ordered arrangement. The first aid instructions are printed on the inside of the glass jar cover and are therefore always at hand when needed. These first aid jars have been made readily available to employers and are now being used extensively in industrial establishments, in public institutions, and private homes.

PHYSICAL EXAMINATION IN INDUSTRY.

The next work of importance undertaken by the Board was the determination of the essential requirements of "*Physical Examination*" in industry generally. This subject was given careful study with a view of arriving at a standard of minimum requirements and records which could be used in connection with practically all employments, or with such additions as the nature of the special employment

would necessitate. The conclusions reached were based on extensive observation and experience in industry, through which it had been learned what physical ailments and what degree of such ailments would interfere with the well-being, efficiency, and safety of the employes at work. The Board agreed upon the various defects requiring attention in physical examinations, and the various degrees of such defects, on the basis of which the suitability of an individual for a specific employment can be determined. The Board also standardized a "Physical Examination Record Card" of convenient size and so arranged that a sufficiently clear and comprehensive record can be made with a minimum amount of clerical work. These record cards have already been used in thousand of cases with entire satisfaction.

The Board gave special attention to methods of "Artificial Respiration" of persons rendered unconscious by electric shock or by asphyxiation from water, smoke or gas. The board expressed itself unanimously in favor of the manual prone pressure method by persons specially instructed therein, but it also agreed that when mechanical devices for artificial respiration are used they should be used principally as auxiliary means and they only by specially instructed laymen or physicians.

Realizing that all efforts for sanitary conditions in workshops and for clean personal habits of persons while at work would be brought to naught if the persons themselves would not make similar efforts in respect to their homes and their personal habits outside the workshop, the board decided to prepare a set of "Health Hints" of prophylactic character, written in simple, concise and direct language, so that they can be readily understood by the average person. The Care of the Teeth, the Care of the Eyes, the Healing of Wounds, the Value of Proper Breathing, the Danger of Promiscuous Spitting, the Cause of Headache, and of Kidney Trouble; these are some of the subjects on which the board has prepared statements which are intended to be printed, each on

a separate leaflet, for wide distribution among employes generally.

STUDY OF OCCUPATIONAL DISEASES.

The Conference Board has also entered into a careful study of diseases peculiar to certain occupations, with a view of learning the most effective treatment of such diseases and the best methods of reducing or entirely eliminating their causes. Some members of the board who are connected with industrial establishments in which the nature of the work or the materials used are apt to cause such diseases, have become experts by special study and extended experience in this field of medical practice. With their assistance and with the help of other invited experts in this field the board is proceeding cautiously and painstakingly in the study of "Occupational Diseases," and expects in due time, to arrive at and publish definite conclusions.

Another important phase of the work of the board is the exchange of specific experiences by the members as they encounter special situations in industry, or as they come in practical contact with the administration of workmen's compensation laws. Many of the corporations represented on the board through their respective medical officers are operating in several states and are therefore subject to more or less widely differing workmen's compensation laws and health regulations. The necessity for uniformity in statutory provisions and in their interpretation has therefore been pertinently brought home to the board and has convinced it of the desirability and need of a standardized nomenclature and definition of medical terms as they relate to industrial work. The board realizes that progress along these lines will be slow, but it believes that substantial progress can be made by thorough investigation along broad lines and by close application to the task.

The Conference Board of Physicians in Industrial Practice is unique in character and in method of work. It is a voluntary association of a small number of men engaged in the same field of professional work, who meet in periodic

conferences of the most informal character, unfettered by any restricting rules and regulations or by any obligation to abide in their individual work by the conclusions of the board. Yet the common purpose which brings these physicians together and the absence of such restrictive regulations, has resulted in a most helpful co-operative effort. The work of the board members, while strictly governed by professional ethics and scientific principles, is given a most pronounced practical aspect from the fact that these physicians in industry have acquired by the nature of their work an industrial viewpoint and understanding that establishes the proper balance between what should be abstractly striven for and what can be correctly accomplished under actual working conditions.

Selected Articles

FRACTURE OF THE HIP.

BY E. G. GIVHAN, M.D.,
Montevallo, Ala.

In presenting this paper, it is not my intention to create the impression that I have some new and startling discovery to communicate in regard to fracture of the hip, but it is for the purpose of inviting discussion to refresh our minds on this subject, so that those of us who have never had one of these cases to treat might not fall into the errors of diagnosis and treatment that a great many of us have. We are too prone to look at this condition lightly, and venture an opinion without a thorough examination. And so frequently we have cause to regret a diagnosis of sprained or contused hip when an x-ray examination reveals a fracture. It is often associated with a very slight injury, such as tripping and falling upon the floor, the fracture frequently preceding the fall.

The accident occurs most frequently in elderly people on account of the senile changes which take place in the structure and form of the neck of the femur. The bone cells enlarge and the cancellous structure undergoes fatty changes; the angle of the neck in relation to the shaft, from being obtuse, gradually approaches a right angle, which tends to weaken the bone. Fracture of the hip in elderly people is often caused by force only sufficient to produce the most trifling bruise in a young subject. It is of comparatively little moment whether the fracture is within or without the capsule, but as to whether it is impacted or unimpacted is of greatest importance. Impacted fractures unite readily, while the unimpacted frequently remain ununited.

The diagnosis of fracture of the femoral neck is based on the existence of marked pain, produced on the slightest motion. In some cases, however, the pain is slight, but it is almost invariably present and usually referred to the seat of injury, or to the groin and inner surface of the thigh. There is almost complete inability to move the limb, the patient finding it impossible to raise the heel from the bed when lying on the back. There are some exceptions to this, however. Whitman has cited cases of young people who were able to walk around after fracture of the hip.

Eversion of the foot with rotation outward of the leg and thigh is a sign of great importance. It is so characteristic that in many instances a diagnosis can be made merely by inspection. The degree of eversion varies in different cases, without reference to the actual relation between the bone fragments. In some case the eversion is so slight, however, that it is noticeable only by comparing the injured with the sound limb. Another sign of importance is a humped appearance of the hip on account of changes in contour. There is some shortening of the limp which is increased in a few days, if not treated. This varies greatly in different cases, however, and according to Johnson may be due to active over-riding, and if present from this cause, may range in amount from a distance so small as to be difficult of measurement to two or more inches. In other cases, without separation, it is due to the change in the angle between the shaft and the neck, and in these it is very often slight.

The comparative measurement of the two limbs is the only true method of detection of shortening, and these measurements should be made with great care. The following is Scudder's plan: "The absence of any pre-existing injury or disease of the hip under consideration is always to be carefully noted. Measurements should always be made with the patient on the back. The leg should be brought gently alongside of its fellow and steadied by an assistant. Measurements should be made from the anterior superior spine of the ilium to the internal malleolus upon each side. If

there is shortening upon the injured side, a fracture with some displacement is likely to have occurred. A normal difference in length of the lower limbs is, however, not unusual. It is therefore necessary to determine the presence of asymmetry if it exists, if any confidence is to be placed in the measurements of the leg. Measurements therefore should be made of the tibia upon the two sides, and these compared. If no asymmetry appears to be present, any differences in measurement may be taken to be absolute. If it is impossible to bring the legs parallel, they must be placed in the same relative position to the median line of the body."

Bryant's method of measurement is worthy of note: "The limbs are placed symmetrically. The top of the trochanter is marked upon the skin. A perpendicular line is dropped from the anterior superior spine of the ilium to the table upon which the patient lies. Measurement is made from the trochanter to this particular line. If fracture of the neck of the femur has occurred and there is displacement or shortening of the limb, the distance from the perpendicular to the top of the trochanter will be less than a like measurement on the uninjured side. The position of the top of the trochanter is determined with reference to Nelaton's line. If the leg is rolled outward, dislocation of the hip forward would be suspected, but absence of the head of the bone anteriorly and the absence of other positive signs should eliminate dislocation. If the leg is rolled inward a dislocation of the hip upon the dorsum ilii would be considered. The absence of other positive signs of dislocation, however, and the presence of the head of the bone in the acetabulum should be convincing of the non-existence of dislocation.

In an elderly person, however, who presents no well marked sign of fracture, but who is unable to use the limb after ever so slight an injury, a fracture of the hip should be so strongly suspected that until the x-ray proves it absent, he should be treated as if a fracture were present."

If the fracture is impacted, crepitus will be absent on general manipulation, unless the impaction has been broken up

by some unwise means. By gentle rotation of the leg crepitus can be detected with the hand, if the fracture is unimpacted. But it is a sign that should not be sought for energetically, lest the bone, if interlocked, be broken apart, which would lessen the chances of union.

The following is the method given by Scudder for examining a patient with suspected fracture of the hip. "First—a prolonged search for crepitus and abnormal mobility should never be attempted. Second—Adopt a routine examination plan. Third—The history of the accident should be obtained, also the presence and location of pain. Fourth—How much of the functional usefulness of the leg is involved. Fifth—What does the inspection reveal as to the local condition and the position of the limb? Sixth—What does palpation reveal? Seventh—How do measurements of the leg and trochanter compare with similar measurements of the uninjured leg? Eighth—In order to make a systematic examination, all clothing should be removed from the patient."

Union with perfect functional results can hardly be expected in any case. Functional results vary, however, according to the seat of fracture and other local conditions. Some disability and permanent limp usually remain, especially in elderly people. The prognosis as to recovery in the young and middle aged is excellent, but not so favorable in the old and feeble. The prognosis as to life depends to a great extent upon the age and strength of the individual and upon the degree of violence which produced the fracture and the associated injuries. Stimson distinguishes three separate groups of fatal cases: In the first there is a marked inflammatory reaction immediately after the injury accompanied by fever; the patient becomes delirious and dies in a few days or develops a rapidly fatal pneumonia. In the second group there is marked shock in old and feeble patients, from which they do not rally; usually death comes in two or three days. In the third group the patient rapidly loses strength, growing weaker and weaker each day, later

developing a delirium and dying after several weeks from exhaustion because of pain and forced confinement.

During the past six years I have had ten cases of fracture of the hip in my practice—two in children under six, three in young adults, and five in elderly people over sixty years of age. The young patients made most excellent recoveries. The two children and one of the young adults had impacted fractures, the other two were unimpacted. Of the five older patients, two died from exhaustion due to pain and long continued confinement. One of the five had an impacted fracture with very good results—slight shortening and eversion with very little limp. The other two had very poor results as far as ability to use the limb was concerned. I could accomplish very little by treatment in these cases, as I had to direct my whole attention to tiding the patient over the shock, which was very difficult in one case, the patient developing acute dilatation of the stomach on the third day after the accident. And you will find the management of such cases to demand the greatest tact. While confined to the bed the patient should be made to feel as comfortable as possible, as immobilization produces great discomfort.

The exact method in any given case of fracture of the hip will depend upon several conditions. It is true that there are some old people who will stand immobilization and confinement in bed remarkably well, but as a rule they do not. We should have great regard for the general condition of these patients and use the method of immobilization which seems best to meet the conditions. There are four recognized treatments for fracture of the hip: First—Traction and countertraction by weight and pulley. Second—The Thomas hip splint method, with or without traction. Third—Forcible abduction and immobilization by plaster-of-Paris with or without traction. Fourth—Pegging. The latter I have never used.

In children and young adults in whom there is little danger to life from confinement in bed, I think the traction and countertraction method far better. The following is Scud-

der's method: "The patient should be placed upon a comfortable, firm, hair mattress. Underneath the mattress, crossing the bedstead from side to side, should be placed several wooden slats about eight inches apart. These bed slats prevent sagging of the mattress and consequent discomfort. Great caution must be exercised that no sudden or forcible movements of the hip are made which might break up the impaction of the bone or cause unnecessary pain. The leg should be placed in as natural position in extension as possible. The knee should be placed upon a pillow. Extension strips of adhesive plaster should be applied to the leg and thigh as high up as the perineum, and should be held to the skin by a gauze roller bandage. A weight of about five pounds should be applied to the extension while the leg is gently rotated and carefully placed approximately in the normal position. The foot of the bed should be elevated to the height of six inches in order to secure counter-extension. Long and heavy sand bags should be placed on each side of the leg and thigh to assist the light extension in affording support and give a sense of security. The heel should be properly protected from undue pressure. The foot should be kept at a right angle with the leg."

I have used this method in two cases with very good results, but do not consider it ideal. Greater immobility is demanded in many cases than the method affords. Non-union and permanent disability often follow its use, besides the depreciation of the patient's general health from long continued confinement in bed, especially in elderly people. In fact, I doubt the wisdom of using this treatment in any patient over sixty years of age. If I did, I would not keep the extension on over three weeks, after this allowing the patient to change position by bolstering up on pillows, etc., or quietly changing to another bed, or if indications warrant it, placing him on a rolling chair.—*International Journal of Surgery.*

Extracts from Home and Foreign Journals

SURGICAL

THE EFFECTS OF VASECTOMY.

We are often asked about the advisability of vasectomy, and if we think it exerts an injurious effect in this or that direction.

The operation of vasectomy has not yet been performed for a sufficient length of time to enable one to answer the various questions asked in reference to it positively and dogmatically. Most of the operations have been performed on the mentally defective and on criminals, and, of course, it is hard to say whether their mental life has been affected. But physically and sexually the operation does not seem to entail any deleterious effect.

We have a good analogy in the sequelæ of double gonorrheal epididymitis. The results of a double gonorrheal epididymitis in obliterating the lumina of the vasa deferentia and preventing the seminal secretion from coming out are often as absolute as those of a vesectomy, and the people who suffer from such an obliteration of the vasa deferentia do not seem to be in any way affected either physically, mentally or sexually.—*The Medical Critic*.

A SIGN IN FRACTURE OF THE PELVIS.

In practically all cases of fracture of the pelvis there will appear in from one to three days a more or less extensive ecchymosis of the perineum and scrotum in men, perineum and labia in women. In cases of not very extensive fractures of the crest of the ilium this sign may not be present.

In fractures of the pubic portion of the pelvic ring (which is the most common fracture), invariably one will find ecchymosis of perineum and scrotum inside of three days.

The diagnosis of fractures of the pelvis in many cases is far from easy. Localized tenderness at the seat of fracture may be the only sign present at the time of injury. Crepitus, the cardinal sign in so many fractures of other bones, is often absent, and in most cases there is comparatively little or no displacement.

This sign does not compare with the x-ray in diagnosis of fractures of the pelvis, but it will be found to be of interest, and will be a help to make a diagnosis before using the x-ray.

Ecchymosis of the perineum will be found present in a much larger percentage of cases of pelvic fractures than is ecchymosis behind the ear and under the conjunctiva in cases of fracture of the base of the skull (Battle's sign), to which it is analogous.

I have not been able to find this sign mentioned in medical literature.—*Medical Record*.

DIET AFTER ABDOMINAL OPERATIONS.

A. Carless, surgeon to Kings College Hospital, London, in a paper in *Medical Press* and circular, states that methods in regard to feeding after abdominal operations have undergone great modifications in recent years, as a result of increasing confidence in aseptic technique. Formerly patients were starved for nearly a week; now the surgeon's desire is to restore the normal activities of the intestinal canal at the earliest date, and where there has been no interference with the continuity of the bowel there is not the slightest reason why the patient, if he desires and feels capable of taking it, should not be given his ordinary food the next day. As for the quenching of thirst, this is best relieved by the administration of saline solution by the bowel, either continuously or in doses of a pint at six hourly intervals. In entero-anast-

omosis a little more care has to be taken with the administration of food, but even in gastro-enterostomy the present-day methods of suture are so perfect that the risk of leakage need hardly be taken into consideration. Carless recommends as purgative measures that a turpentine enema be given on the day after operation when the patient generally suffers from distension and some colicky pains. On the second or third day an ordinary routine purgative is necessary in most instances, and the patient may be given castor oil or calomel. Subsequently the bowels are kept acting daily by senna, cascara or some other mild laxative.—*The Medical Brief*.

MEDICAL

INTESTINAL STASIS.

Guy Cluxton Boughton, in the *International Journal of Surgery*, states that very little medication is needed in the treatment of intestinal stasis, but good hygiene and diet play a most important part, with tonics and other supportive measures. In place of cathartics, which were formerly used in faulty alimentary elimination, lubricants in the form of liquid paraffine or Russian oil give the most satisfactory results in the treatment of these cases; and too much care can not be given to the selection of this oil, for it must be free from all irritating and harmful ingredients. As regards dosage, from one-half to one tablespoonful is taken morning or night, or one-half hour before each meal. The action of the oil is mechanical, for it acts as a lubricant to the intestinal tract and as a coating to the fecal mass, thereby protecting and preventing irritation and abrasion of the mucous membrane. It is not absorbed or digested as it passes through the intestinal tract, and is not decomposed.

Many cases, in spite of careful medical treatment, may progress to a stage of chronic intestinal stasis, and then it becomes necessary to perform a laparotomy for the purpose

of removing bands, veils, and folds, straightening kinks, and even in these patients the above treatment should be used before and after operation.—*The Medical Brief*.

EMETINE IN MUCOUS COLITIS.

In a paper in *The Practitioner*, Dr. W. Beresford Robinson tells of his employment of emetine hydrochloride in a very severe case of mucous colitis of two years' standing. The patient, a woman, was passing mucus mixed with blood, and suffered greatly from abdominal pains, had severe headaches, and during menstrual periods was in agony, which was relieved only by means of morphine. Every ordinary drug had been tried for the relief of her condition, but all had failed. The patient's pulse was feeble and rapid (120), and she was confined to her bed, utterly prostrated, the least exertion leading to fainting attacks.

In December, Dr. Robinson began with the emetine, injecting one-half grain daily. Within a week, all hemorrhage had stopped and there was less mucus than at any time during the entire illness. The pulse improved in strength and volume, and the pain was greatly lessened. The following menstrual periods practically were painless. In six weeks the patient was able to walk about a little and could enjoy a drive. Except for a brief setback, caused by an intercurrent influenza, this woman has continued to improve.—*The Medical Brief*.

SUGAR FOR SICK INFANTS.

Nobecourt and Nadal (Bulletins de la Societe de Pediatrie, Paris), here report the results of adding 10 per cent ordinary sugar (saccharose), to the food the infants were getting. This was rice-water, buttermilk, milk kefir, or pea or bean broth in thirty cases described in detail. This large amount of sugar seemed to be instrumental in promptly arresting a tendency to excessive vomiting in two or four cases.

In sixteen much debilitated infants or backward in developing, the high sugar content was generally well tolerated and in eight of the cases aided in a rapid and progressive increase in weight. One babe of 10 months was unable to take starch in any form, but thrived well on the highly sweetened milk. Another child whom they describe as an "azotemic athrepsix," grew into vigorous health in a few months on the highly sweetened milk. No sugar was ever found in the stools or urine. In the eight other cases the cachexia continued unmodified. Six infants with acute dyspepsia took the sugar well and rapidly recovered. Other infants with bronchitis and other affections took the sugar well, and it seemed to have a favorable influence on the course. No signs of intolerance of the sugar were observed in any of the infants. As a rule, the stools lose their diarrhetic character. The sugar evidently sustains the strength and combats the destruction of tissues.—*Pediatrics*.

ERADICATING MALARIA BY WAY OF THE HUMAN HOST.

Japan decided to combat malaria in Formosa, not by filling up ponds, etc., and thus diminishing the anopheles, but by rounding up the human inhabitants and exterminating the protozoa in them; 996,621 persons were examined and 11,896 carriers were found and treated with quinine. In two districts the malaria mortality has been reduced to zero, from rates of 15:1000 and 5:100 respectively. In another, the reduction has been from 11.60 to 3.39:1000—all in two years. This is an exemplification of the "Man at a Time" doctrine. Essentially the same results have been obtained, according to our Associate Editor, Dr. Pel, in Holland, not from any formal campaign but simply in the course of ordinary intelligent therapeutics. There are many localities in which the filling up of breeding places or the use of kerosene or crude oil, etc., is of prohibitive magnitude or undesirable for economic reasons. The results noted seem to settle the question as to whether, in a practical sense, the pri-

mary host is man or the anopheles, and eradication by way of the human is a simpler and more directly humanitarian method.—*Practical Medicine*, Calcutta.

DERMATOLOGIC REMINDERS.

Remember that painting a limited moist patch of eczema with a solution of nitrate of silver often promptly cures the disease.

Remember that within two months two female lice can become the grandmothers of 10,000 lice.

Remember that in pruritus cutaneous, the itching can be so intense as to drive the patient to suicide.

Remember there are few diseases more easy to cure than ringworm of the general surface of the body, and few diseases more difficult to cure than ringworm of the scalp.

Remember that cinchona and quinine can produce all the primary skin lesions, though most frequently it causes an erythema of scarlatinal type, attended by congestion of the fauces and followed by desquamation.

Remember that in some very chronic thickened eczemas, the tar may be rubbed in pure.

Remember that though furunculosis is most frequent on the back of the neck, face, forearms, buttocks, and legs, it may occur anywhere.

Remember that cannabis indica is sometimes very useful in stopping general itching.

Remember that some skins can not tolerate even a small percentage of glycerin.

Remember that trichloroacetic acid is an excellent caustic.

Remember that Bier's hyperemia will remove pus from furuncles, but will not remove wrinkles.

Remember that cold cream may be distinctly beneficial in dry skins, as it protects against chapping, but it may be harmful in cases of seborrhea and acne, as it furnishes a better medium for the growth of bacteria.

Remember that a greasy skin is best treated with soap and water.

Remember that in monilethrix treatment is practically useless.

Remember that in treating intertrigo the first essential is absolute cleanliness.

Remember that in dermatitis herpetiformis itching may be complained of before the eruption appears.

Remember that every eruption does not constitute pemphigus.

Remember that herpes facialis occurs in about one-third of all cases of pneumonia and malaria, and in almost one-half of the cases of cerebrospinal meningitis, but is rare in typhoid fever.

Remember that most cases of herpes zoster get well spontaneously in one to three weeks.

Remember that arsenic is of little or no value in prurigo.

Remember that sulphur is the most efficient remedy in acne, and may be used in the form of powder, ointment, paste, or lotion.

Remember that in the treatment of plant-poisoning, wet compresses of a solution of sodium hyposulphite, one dram to the ounce, are useful.

Remember that in vascular nevi, especially those of small size, refrigeration with carbon dioxide constitutes one of the best methods of treatment.

Remember that sycosis vulgaris is sometimes cured by injection of staphylococci emulsions.—*Medical Review of Reviews*.

HEXAL AS A URINARY ANTISEPTIC.

C. Grunbaum (Klinisch-therapeut. Woch., No. 23, 1914) finds that hexal is not only a urinary antiseptic but it is an astringent and acts as such on the mucous membrane of the bladder. Prolonged use, however, does not cause injury of the bladder mucosa. It also has a diuretic action.

Soon after beginning treatment with it the mucopustular urine becomes clear and the urine becomes acid in reaction. Hexal is a compound of hexa-methylenetetramin and sulfo-salicylic acid. The dose employed by the author was two tablets three or four times a day in a wineglass of water and usually after three or four days the subjective symptoms, such as frequency of urination, pain on urination, etc., began to show amelioration. He believes that it is far superior to urotropin, and advises it as a prophylactic against infection in cases of catheterization in treatment with sounds and bougies.—*Pacific medical Journal*.

SOME INDICATIONS FOR VENESECTION.

Theilhaber mentions the recent revival of venesection in medical literature, and cites a recently published article on this subject by Engelhorn (he is silent concerning the recent monograph by Heinrich Stern of New York, which has been published in both German and English). The abrogation of this practice conforms closely to the latter half of the nineteenth century, but the rejuvenescence now in evidence appears to show that this negative period represents a gain only through the breaking up of the routine tendency to bleed. The new indications correspond largely to the best of the old. Engelhorn has bled for the climacteric and for dysmenorrhea, and these conditions demand a series of bleedings, or, in other words, phlebotomy is raised to the dignity of a system of treatment. The author finds the letting of a little blood a good remedy for nervous headache in which we may assume the existence of a congestion of some of the sensory nerves. Naturally anemia is a contraindication. Of great interest is the suggestion to bleed those who have recently recovered from cancer operations. Animal experiments show that bleeding causes a marked stimulation of the bloodmaking organs. This was recommended a century ago by Bayle. The author would bleed every six months and combine the resource with the usual physical

remedies. There is reason to believe that the newly formed blood antagonizes the reappearance of the cancer.—*Medical Record*.

OBSTETRICAL

X-RAY TREATMENT OF UTERINE FIBROIDS.

Stern, in the *American Journal of Obstetrics*, after report-successful cases, concludes that the dangers of X-ray therapy in the treatment of uterine fibroids, with proper technique, are absolutely none. In cases in which we want to establish a permanent amenorrhea, the massive dosage method (Freiburg technique) is decidedly superior to the fractional dosage method, as giving quicker and more satisfactory results.

In younger women in whom we merely aim to get a diminution of the size of the fibroid, with a temporary amenorrhea and a re-establishment of menstruation, the fraction dosage method is preferable. In these cases a comparatively short time after the re-establishment of menstruation, the patients may conceive, go through a normal labor, and give birth to normal children. All uncomplicated cases of uterine fibroids are amenable to X-ray treatment. The nearer the patients are to the climacteric period the surer and quicker the results. In these cases, properly treated, we can look forward to getting practically 100 per cent cures.

Frank, in the same journal, states that roentgenization of uterine fibroids can not be used with safety in rapidly growing tumors; in cases of metrorrhagia in which complete preliminary curettage with microscopical examination of the curettings is not feasible; in complicated cases in which ovarian cysts or serious adnexal trouble can not be excluded; in fibroids complicating pregnancy. He believes that the rays should not be used where expense is a factor. The rays are of chief value where operation is declined;

where operation is contraindicated because of extreme physical unrest. Consequently, X-ray treatment is applicable to at the most five or six per cent of all patients having fibroids.

Pfahler (*New York State Journal of Medicine*, September, 1915), says that Roentgen therapy must be looked upon as a very efficient adjunct to the gynecologist's armamentarium, and while he believes that the rays should be applied by the roentgenologist, he should at the same time work hand in hand with the gynecologist. Deep Roentgen therapy stops the hemorrhage associated with uterine fibroids. This is followed by a gradual disappearance of the tumor. This atrophic process may extend over several years, continuing long after the cessation of treatment. The treatment of metropathic hemorrhage is almost uniformly successful. Uterine hemorrhage occurring at the menopause, when not malignant, will usually respond very quickly. There should be an increase in weight and an improvement in the blood condition following treatment, and when this does not occur suspicion of malignancy should be aroused (Albers-Schonberg). Some good results can be obtained in inoperable carcinoma. The deep Roentgen therapy should be especially recommended as postoperative treatment in all cases.—*The Medical Brief*.

PITUITRIN IN UTERINE INERTIA.

Administered hypodermically during the second stage of parturition (it should not be given during the first stage), pituitrin is said to convert a case of tedious inertia into one of normal rhythmic labor, saving time, preventing suffering on the part of the mother, and diminishing the risk to the child which attends upon protracted labor. Furthermore in many cases it obviates the use of forceps. Pituitrin is a pituitary extract, otherwise described as a solution of the active principles of the infundibular portion of the pituitary gland in animals). This gland, as is well known, lies at the

base of the brain. There are a number of pituitary extracts on the market—products, it may be said in all fairness, not equal in therapeutic efficacy. To be of definite value as an oxytocic it is obvious that the solution or extract must be highly active. Owing to unavoidable variations in fresh glandular tissue, the amount of gland substance represented in the preparation is not an accurate index of its strength. Assurance of therapeutic activity can be obtained only by rigid assay. In view of these facts a recent statement of Parke, Davis & Co. with respect to their pituitrin is peculiarly significant: "Because of its importance in obstetrical practice we have given much attention to a determination of the proper strength and standardization of pituitrin. The result of our investigations is a product of high potency, representing the average activity of 0.2 gramme of fresh posterior pituitary lobe to each c. c. of the solution. As an oxytocic pituitrin stands without a rival. There is no more active pituitary extract. Pituitrin is standardized by the two accepted methods of determining pituitary activity; the blood pressure test and the oxytocic test, the latter by use of the isolated uterus. Every lot of pituitrin represents the same degree of activity." Pituitrin is supplied in glaseptic ampoules of 1 c. c. and $\frac{1}{2}$ c. c. capacity, convenient for hypodermatic administration.—*The Medical Herald*.

ECLAMPSIA.

In a series of thirty-eight cases of toxemia of pregnancy, in which Evans studied the blood pressure findings, he placed the danger limit of pressure at 160 mm. As his experience increases he says he is surprised at the number of cases in which the general symptom complex indicates a very considerable degree of toxemia, while the blood pressure readings are comparatively low. A serious grade of pregnancy toxemia may exist while the blood pressure remains approximately normal. As regards treatment, every

individual case must be studied, and no single method of treatment is applicable to all. In the presence of evident symptoms of toxemia in the later months of pregnancy, associated with albuminuria and casts, and an increased blood pressure, eliminative and sedative treatment is indicated. One must rely on milk, diet, hot baths, the copious use of fluids and purgatives associated with rest in bed, to bring about improvement. If there be no improvement, indicated by the subsidence of the albuminuria, reduction of blood pressure and disappearance of the general symptoms of toxemia, then labor should be induced. Venesection, sweating, the employment of morphin and chloral in moderate doses, with purgation and the free use of fluids, constitute the treatment of a case of actual convulsions. In case at or near term active surgical methods of delivery may be undertaken, but only to save the life of the child, as such operations, unless attended with considerable hemorrhage, seem to have but little influence in relieving the condition of the mother.—*The Journal of the Amer. Med. Asso.*

THE CAUSE OF CHOREA COMPLICATING PREGNANCY.

Albrecht (Ztschr. f. Geburtsh. u. Gynak., 1915, lxxvi) describes the case of a primipara aged twenty-two years, who was taken with chorea at the beginning of the first pregnancy. Her condition became pronounced and she was treated by intragluteal injection of 20 c. c. normal pregnancy serum. In twenty-four hours the choreic movements ceased and the patient was much better. She also gained somewhat in weight. He adds the case of a girl, aged sixteen years, in whom chorea appeared at the time when menstruation became established. From the study of these cases he believes that chorea is an intoxication in the pregnant patient with substances formed by the embryo, or in patients at puberty with substances produced by the glands which form the internal secretions.—*Pediatrics.*

Editorial

PUBLISHER'S NOTICE—The Journal is published in monthly numbers of 48 pages at \$1.00 a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money order, draft, or registered letter, should be addressed to the Business manager, C. S. Briggs, M. D. corner Summer and Union Streets, Nashville, Tenn.

All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

ONE MORAL CODE FOR BOTH SEXES.

The above is a theme which is much discussed and written about. Books, stories, and plays often portray the evils of the difference in standard for the two sexes, and there are few who fail to see how unfair to woman is the present standard. Equality in this matter is certain to come but the great-great-grandson of the newest babe will hardly live to see it. Those who write and talk most of such a Utopian standard at the present time probably think little, perhaps not all, of the many changes which must occur in society and in man himself, before such a state of affairs is possible. These changes must occur not only along economical and sociological lines, but physiological and pathological lines as well. The sexual instinct in civilized man as in the male savage and males of the lower animals, is more powerful and compelling than in the female. Women have a similar instinct, an indefinable and indefinite desire, but it is less developed, less obtrusive, and more amenable to control than that of man. Were such not the case, woman would not, could not wait to be wooed but would herself go a-wooing. To overcome this physiological basis of the double standard, either the male sexual instinct must weaken or the control of that instinct must become greater. We see evidences that civilization has already done something in this respect.

To overcome the pathological obstacle, education in sexual matters must be carried out so that venereal diseases, especially gonorrhea, can be wiped out, since an old gonorrhea tends to keep the sexual organs of the male in a state of excitement.

Sociologically the work must be done along lines of sexual education also, in order that women may know the dangers they incur in marrying men who are dissolute. The knowledge that a prospective husband has been wild deters relatively few girls from marrying today simply because of the present double standard and the ignorance, gross ignorance of the prevalence of venereal diseases among those men who worship at the shrine of Venus. A greater circumspection in regard to mens' habits will have some effect in developing their self-control.

Economically, equal suffrage will do much, since a higher woman's wage and greater diversity of occupations will prevent many from taking the first fatal step and will also enable many to redeem themselves even after such a mistake. Most women are bad because of man and man's laws and not because they choose the path of evil.

How anybody can oppose education in sexual matters when so many girls are innocently, ignorantly ruined, is beyond conception. Man can indulge his passion and escape social punishment because the proof of guilt is not at hand, but woman is often left with the unmistakable evidence of sin. To hide this evidence she must not only commit a crime but must also smother the maternal instinct, and the latter is as great in her as is the sexual instinct in man. Small wonder then that many a girl submits to the shame of illegitimate maternity. And many times she suffers thus through ignorance. She may realize she is sinning and yet sin for love, but she hardly realizes her danger until too late, until the seed is sown and the product germinating.

Reverting to the physiological, we find another difficulty to be surmounted and this difficulty is perhaps the greatest of all; woman can sell herself to many men and yet not suffer physically. This man can not do and retain his health.

Consequently man must work, beg, or steal while woman always has the other path open before her, repulsive or inviting as the case may be, but ever present and always open. Each woman who yields to this temptation, constitutes herself one more stone in the barrier which must be destroyed before man and woman will live under one moral law.

In spite of all these impediments, and others too, the single standard will surely come but its advent can be held back for centuries by ignorance, false modesty and an unwillingness to depart from the traditions of the past.

W. T. B.

SAMPLE COPIES.

Attention is called to the many physicians who are receiving sample copies of the Journal to the premiums offers made to new subscribers of which notice is made in the advertising pages. For the price of one year's subscription to the Journal (\$1), that periodical is sent for one year and with it is sent a handsome clinical thermometer in aluminum case with chain and pin. For \$1.45 a year's subscription, one clinical thermometer and ten weeks' subscription to *Harpers Weekly*, a periodical that gives pictures of the war in Europe with appropriate text upon the same—a \$3 value for \$1.45. We hope many to whom sample copies are sent will avail themselves of the opportunity and become subscribers to a medical Journal which is pre-eminently a Journal for the practical physician.

ALCOHOL AND PNEUMONIA.

The United States Public Health Service brands strong drink as the most efficient ally of pneumonia. It declares that alcohol is the handmaiden of the disease which produces 10 per cent of the deaths in the United States. This is no exaggeration. We have known for a long time that indulgence in alcoholic liquors lowers the individual vitality, and

that the man who drinks is peculiarly susceptible to pneumonia. The United States Public Health Service is a conservative body. It does not engage in alarmist propaganda. In following out the line of its official duties it has brought forcefully to the general public a fact which will bear endless repetition. The liberal and continuous user of alcoholic drinks will do well to heed this warning, particularly at this season of the year when the gruesome death toll from pneumonia is being doubled.

DO YOU KNOW THAT

Four per cent of the inhabitants of certain sections of the South have malaria?

The United States Public Health Service has trapped 615,744 rodents in New Orleans in the past eighteen months?

The careless sneezer is the great grip spreader?

Open air is the best spring tonic?

Typhoid fever is a disease peculiar to man?

Measles kills over 11,000 American children annually?

There has not been a single case of yellow fever in the United States since 1905?

FIRST UNIVERSITY DENTAL SCHOOL IN NEW YORK FOR COLUMBIA.

Dental Course to be Allied with College of Physicians
and Surgeons.

Realizing the importance of the teeth and mouth infections to systemic disease, the faculty of the College of Physicians and Surgeons have unanimously voted in favor of the establishment of a dental department, to be connected with the medical school. A committee of prominent dentists of the city have presented plans to the medical faculty which have been approved.

The school of dentistry will be closely associated with the medical school and the admission requirements will be the

same as the medical. The course will be four years, the first two years the same as those in medicine, thus giving the dental student a thorough knowledge of the fundamental sciences necessary to the practice of a specialty of medicine. At the end of the second year the dental student will give all his time to the study of dental subjects, namely, operative dentistry, prothetic dentistry, oral surgery, and oral pathology, orthodontia, etc., and the more technical part of the work required for the well trained dental surgeon. This new school will be the first university dental school in New York City and the second in the State. It will give the first four-year course of dentistry ever given in the Empire State.

Who would have thought that the tin can is a menace to the public health? The expert malaria investigators of the U. S. Public Health Service have found, however, that discarded tin cans containing rain water are breeding places for the mosquito which is the sole agent in spreading malaria. A hole in the bottom of the empty can might have resulted in the saving of a human life. Certainly it would have assisted in preventing a debilitating illness. Empty tin cans have no business about the premises anyway, but if we must so decorate our back yards, let's see to it that the can has a hole in the bottom.

CHIEF STATISTICIAN FOR VITAL STATISTICS (MALE), \$3,000.
April 25, 1915.

The United States Civil Service Commission announces an open competitive examination for Chief Statistician for Vital Statistics, for men only. From the register of eligibles resulting from this examination certification will be made to fill a vacancy in this position in the Bureau of the Census, Department of Commerce, Washington, D. C., at a salary of \$3,000 a year, and vacancies as they may occur in positions requiring similar qualifications, unless it is found

to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

The Chief Statistician for Vital Statistics is the administrative and statistical head and has full charge of the work of the Division of Vital Statistics. He supervises the collection of transcripts of certificates of births and deaths, the tabulation and compilation of the statistical items on these transcripts, and the outlining and presenting of these statistics in the form of annual reports; he aids in securing enactment of efficient laws for the registration of births and deaths, both by correspondence and, if necessary, by appearing before State legislatures and committees thereof; he supervises the investigation of the completeness of the registration of deaths in cities and States which are not now in the registration area but which have requested admission thereto, and makes such recommendations to the Director of the Census in regard to their admission as the results of the investigations justify; he is expected to attend the meetings and conventions of medical and statistical bodies, such as the American Medical Association, the American Public Health Association, and the American Statistical Association.

Competitors will not be assembled for examination but will be rated on the following subjects, which will have the relative weights indicated:

<i>Subjects</i>	<i>Weights</i>
1. Practical tests in statistics.....	20
2. Thesis	20
3. Education	25
4. Experience	35
<hr/>	
Total	100

Graduation from a recognized medical school and at least four years' experience in charge of the vital statistics of a city or a State or in a position of similar importance requiring expert knowledge of vital statistics are prerequisites for consideration for this position.

Special credit will be given for experience in the practice of medicine and in positions of an executive character.

In connection with the first subject, the applicant will be provided with certain statistical data upon which he will be required to submit a statistical criticism, in accordance with instructions furnished.

In connection with the second subject, the applicant will be required to submit a thesis of approximately 2,000 words, either typewritten or in handwriting, on one of a number of subjects given.

Statements as to education, experience, and fitness are accepted subject to verification.

Applicants must have reached their thirtieth but not their fiftieth birthday on the date of the examination.

Under an act of Congress applicants for this position must have been actually domiciled in the State or Territory in which they reside for at least one year previous to the date of the examination.

This examination is open to all men who are citizens of the United States and who meet the requirements.

Persons who meet the requirements and desire this examination should at once apply for Form 1312, stating the title of the examination for which the form is desired, to the United States Civil Service Commission, Washington, D. C.; the Secretary of the United States Civil Service Board, Post Office, Boston, Mass., Philadelphia, Pa., Atlanta, Ga., Cincinnati, Ohio, Chicago, Ill., St. Paul, Minn., Seattle, Wash., San Francisco, Ca.; Customhouse, New York, N. Y., New Orleans, La., Honolulu, Hawaii; Old Customhouse, St. Louis, Mo.; Administration Building, Balboa Heights, Canal Zone; or to the Chairman of the Porto Rican Civil Service Commission, San Juan, P. R. Applications should be properly executed, excluding the medical certificate, but including the county officer's certificate to which a 10-cent internal revenue stamp must be attached, and filed with the Commission at Washington prior to the hour of closing business on April 25, 1916. Those meeting the preliminary requirements, as

shown in connection with their applications, will be furnished with a special form and material for Subjects 1 and 2, which must be submitted to the Commission prior to the hour of closing business on May 16, 1916. The exact title of the examination as given at the head of this announcement should be stated in the application form.

Issued March 15, 1916.

Obituary

DEATH OF DR. RODMAN.

The announcement of the death of Dr. William L. Rodman, President of the American Medical Association, which was briefly made last week, came as a shock to our readers. He had been unusually active during the last few months, and had come in contact with a great many members of the profession. He had spent much time in visiting and addressing medical meetings, and in promoting the new National Board of Medical Examiners. Dr. Rodman had been active in the affairs of the Association for many years. In 1897 he was chairman of the Section on Surgery, presiding at the Denver meeting; in 1900 he delivered the oration in surgery on gastric ulcer. He was a member of the Board of Trustees from 1900 to 1903. He was a member of the House of Delegates from Pennsylvania in 1905-1906; a member of the Committee on National Legislation for many years, and for seven years chairman of the committee on Reciprocity, until the work of this committee was turned over to the Council on Medical Education. It was during the time that he was chairman of this committee that he became interested in the plan for a voluntary national licensing board. The ambition of years to see such a board organized was practically realized, as the board was on a permanent basis at the time of his death. Dr. Rodman took a deep interest in various matters of public welfare. He was interested in the work of reorganization of the medical department of the army and the strengthening of the preliminary requirements in the practice of medicine, in the American Society for the Control of Cancer, and during the last few months in medical military preparedness. This, we believe is the first time that a president of the association has died during his term of office. The By-Laws provide that in case of the death of the president the vacancy shall be filled by the ranking Vice president. Therefore, Dr. Albert Vander Veer of Albany, N.Y., will complete Dr. Rodman's term as president.—*The Journal of the American Medical Association.*

Reviews and Book Notices

"Social Travesties and What They Cost."—By D. T. Atkinson, M.D.,
New York. Vail-Ballou Co., Publishers.

In this latter day movement for social reform, this small volume should prove both attractive and instructive. The author in this work discusses the social question frankly and forcibly, placing the subject before the public just as it is. Argument is used for the more extensive promulgation of knowledge of sexual amenities and for the better education of the sexes in sexual matters. The figures given in the work are startling as showing the results of ignorance in these questions and the appalling condition that follow pernicious economic environments. The book is exceedingly well written and arranged, and is interesting reading for the thoughtful physician. We take great pleasure in recommending the book and feel sure that it will accomplish its modicum of good in helping along the wave of social reform.

"The Colorado Industrial Plan."—By John D. Rockefeller, Jr., Including
a Copy of the Plan of Representation and Agreement Adopted at
the Coal and Iron Mines of the Colorado Fuel & Iron Co. 19116.

We are indebted to the author for a copy of this interesting booklet concerning relations between large mining corporations and the employes of those organizations. The labors of the distinguished author in adjusting differences between organization and employes have been recognized all over the country and much praise has been bestowed upon Mr. Rockefeller for the part he has had in these affairs. The article in this booklet on "Labor and Capital—Partners", reprinted from the *Atlantic Monthly* for January, 1916, is an able discussion of the subject. Also noteworthy, are two addresses delivered by the author while in Colorado in October, 1915.

"Progressive Medicine." A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics, Materia Medica, and Diagnosis in the Jefferson Medical College, Philadelphia. Assisted by Leighton F. Appleman, M.D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia. March 1, 1916. Owners and Publishers, Lea & Febiger. Philadelphia. New York.

We acknowledge with thanks to the publishers, the March number of this excellent quarterly publication, and we find that as with all preceding numbers of this periodical a veritable mine of useful up-to-date information. The following is the contents of this volume. Surgery of the Head and Neck by Charles H. Frazier, M.D., Surgery of the thorax Excluding Diseases of the Breast by Geo. P. Miller, M. D., Infectious Diseases Including Acute Rheumatism, Croupous Pneumonia, and Influenza by John Ruhrah, M. D., Diseases of Children by Floyd M. Crandall, M. D., Rhinology and Laryngology by Geo. B. Wood, M. D., Otology by Herman L. Saunders, M. D., and Index. For the progressive physician this quarterly is invaluable as it presents in attractive and collective form the most recent advances and discoveries in the sciences of medicine and surgery. We unhesitatingly recommend this publication to any practitioner who desires to keep up with the ever advancing progress of medicine and would urge every one to subscribe to it without delay.

Publisher's Department

Pepsin is undoubtedly one of the most valuable digestive agents of our *Materia Medica*, provided a good article is used. "*Robinson's Lime Juice and Pepsin*" (see adv. in this number) we recommend as possessing merit of high order.

The fact that the manufacturers of this palatable preparation use the purest and best Pepsin, and that every lot made by them is carefully tested before offering for sale, is a guarantee to the physician that he will certainly obtain the good results he expects from Pepsin.

INTESTINAL TOXEMIA.

The investigations of Metchnikoff and Schmidt, together with the later studies of Lane, Jordan and many others have laid such emphasis on the evils resulting from intestinal stasis that it is at least recognized that no small proportion of the diseases afflicting the human family are directly attributable to faulty elimination of the intestinal accumulations in the lower bowel. For a long time, to be sure, the evils of chronic constipation have been realized, but it is doubtful if, until Lane began to speak of the large intestine as the cesspool of the human body," the dangers of intestinal putrefaction were fully appreciated.

It is hardly probable that Lane's radical treatment of "short circuiting" the bowel—the removal of three to eight feet of intestine—will ever be popular and simpler measures will unquestionably hold a definite place in the management of intestinal stasis for some time to come.

Many and various are the remedies that have been employed with more or less success, but among recent remedies brought forward for accomplishing intestinal elimination, and, what is often of even greater importance, the removal of certain local intestinal conditions contributory to, or the result of the bowel stasis, Prunoids unquestionably

stands first. This unique combination of phenolphthalein and other carefully selected drugs has been found an evacuant of exceptional value. Its effect is prompt and certain, with none of the iniquities of the commonly used laxatives and cathartics. Prunoids do not gripe nor occasion the slightest discomfort, although they produce very copious movements. Most important of all, however, is the physiologic effect on the intestinal glands and muscular tissue that follows their systematic use. Unlike most cathartics, the reactionary effect never tends to increase the constipation. One effective dose is often followed by regular movements for several successive days, and used routinely, in the absence of organic causes, gradual diminution and at last complete cessation of the remedy is always possible; in other words, a more or less permanent correction of the constipation is an almost invariable result.

Such a preparation, with its broad field of satisfactory application, can not fail to appeal to the zealous physician. Any medical man who is not familiar with the exceptional clinical value of Prunoids, is urged to write for samples to the Sultan Drug Company, Saint Louis, Mo.

Ask any doctor point blank, the antidote for opium, or arsenic, or strychnine, and his answer would be prompt and practical. But ask him the antidote for physiological friction and he might hesitate before word lubrication came to mind. Nevertheless, lubrication is a word that should suggest much to the doctor, for he needs lubrication—and not only lubrication, but perfect lubrication, every time he uses the catheter, sound, speculum, scope, the examining finger, or any instrument of penetration.

Hence friction's antidote should suggest K-Y Lubricating Jelly. Nay more, it should persuade or compel him to have at hand, in his bag and on the shelf, a tube of "K-Y," which is insurance against trouble or annoyance.

K-Y Lubricating Jelly is a perfect lubricant.

It is greaseless and water-soluble, which means that it is efficient and convenient. Its essential property is slipper-

iness and it is not sticky. Neither does it stain the skin or soil the clothing. It is emollient and protective. It is transparent and economical to use.

Consequently it is not only of service for lubricating instruments of penetration, but it serves as an effective dressing or application to burns and scalds. When applied early, taking care to cover all of the affected surface, it often prevents blistering. It relieves the soreness of chafes and promotes healing.

It soothes pruritus even of the most severe kind, in many cases, and is useful in dermatitis, urticaria, eczema, irritable ulcers, etc.

One especially valuable use for K-Y Lubricating Jelly is to anoint the skin in scarlatina, measles, chicken pox, etc. It protects, allays irritation, and can be used without soiling or staining the clothing of the patient.

K-Y lubricating jelly also keeps the surgeon's hands supple, protects against bichloride rash and "protects the feel."

WHEN THE STOMACH IS TIRED OR LAZY.

The artificial digestives, such as pepsin, pancreatic pain, etc., have their place in modern therapy, but they should always be used with care and common sense. How often do we encounter patients who are continually dosing themselves with pepsin or some one of the artificial digestives after each meal? Ninety-nine times out of a hundred this is unwise and a positive harm. Indeed, the process of digestion should be encouraged—the stomach urged to do its own work—for any remedy that will specifically stimulate these functions to nearer normal action will produce permanent benefits that can never come from pepsin. Seng is such a remedy, with a well defined secretory action on the glands and mucous membranes of the stomach that enables it to restore and increase the functional activity of an organ that in the great majority of instances is only over tired or indolent.

NASHVILLE JOURNAL — OF — MEDICINE AND SURGERY

CHARLES S. BRIGGS, A.M., M.D., Editor.
W. T. BRIGGS, B.A., M.D., Associate Editor.

VOL. CX.

MAY, 1916.

No. 5

Original Communications

ECLAMPSIA.*

BY SAM K. COWAN, M.D.,
Nashville, Tenn.

Eclampsia is a symptom complex, presented by pregnant women, of which convulsions, followed by coma, are the most prominent manifestations.

Its history dates back to the time of Hippocrates, who mentions convulsions occurring in those pregnant women who had headache, and were inclined to sleep.

It occurs in from 2 to 4 per cent of pregnancies and usually during the later months of gestation, although fatal cases are known in the 4-6 mo., and it has been reported as early as 10th week.

In about 20 per cent of cases convulsions appear during pregnancy, 60 per cent during labor, and 20 per cent during puerperium.

Cause—All authorities agree that it is a toxemia, about the origin of which many theories have been advanced, but none have been proven. The liver is accused by some, the

*Read before Nashville Medical Symposium, March 22, 1916.

kidney by others, on account of the pathology of these organs found on autopsy. Franke claims ferments in the placenta may produce the toxins.

Disturbed glandular balance between the organs with internal secretions is another theory. Lange has cured the albumin of pregnancy by the administration of iodothylin, and believes the thyroid gland responsible. Others have used thyroid extract successfully in albuminuria, also acid intoxication has its followers. Quite a few men claim it is an infection on account of its febrile nature, occurring in previously healthy women after a few days prodromata, and on account of the fact that it frequently follows tonsillitis or some other acute infection; also on account of the frequency of sepsis in eclamptics.

It is thought to be allied to uremia, and while albumin is found in the urine of all eclamptics it has not been decided whether the kidney lesions are the cause or result of the cause.

Cause of convulsions—The toxins, if they are the cause irritate the nerve centers as do other specific poisons—strychnine, tetanus, etc., with a special affinity for the cortex of the fore part of the brain, and as in other poisons, are induced by external irritants, as slamming doors, jarring bed, external or internal examination, induction of labor, hypos, enemas, etc.

Predisposing causes are previous attacks, primiparity, especially in advanced years, heredity, excessive nervous irritability, multiple pregnancies, contracted pelvis, infantilism and previous diseases of liver and kidney.

Pathology is found on autopsy in brain, liver, kidneys, circulatory system, lungs, and changes corresponding to those in mother are found in fetus. *In the brain* there is flattening and moderate edema of convolutions with anemia or congestion. Hemorrhages or areas of central softening with thrombosis.

The liver shows the most typical and constant changes. There is albuminoid degeneration with hemorrhagic and

anemic necrosis around the small portal vessels and a fatty degeneration of the periphery of the lobules, resembling acute yellow atrophy. *Kidney* lesions also appear in practically all cases of eclampsia, cloudy swelling and fatty degeneration of epethelium are the rule. These changes are believed by most authorities to be secondary to liver changes.

Circulatory system—The ventricles are contracted, the auricles full of dark-red blood, which does not clot readily. Heart muscle is fatty with tiny hemorrhages, necrosis, and thrombi; it tears easily. Thrombi and emboli are very common in the fine vessels of the lungs, liver, kidney, brain, and skin. Microscopic findings in blood are not constant. Marked leucocytosis, the multinuclear predominating, is sometimes found. Congestion and edema of lungs are usually shown.

Symptoms—Eclampsia may attack a pregnant woman, who has apparently been in good health up to the moment of the onset. However, this is not the rule. Prodromal symptoms exist from a few hours to several weeks before the seizure. Severe headache, frontal or occipital, dizziness, disturbances of vision, and sometimes complete blindness from edema or albuminuric retinitis. Puffiness of eyes and cheeks and upper extremities, insomnia or inclined to sleep. Nervousness, twitching of muscles, cramps, epigastric pain, nausea, and vomiting, tenderness over pit of stomach and liver. High blood pressure and accentuated 2d heart sound. Urine is usually diminished; high specific gravity and low in urea output and total solids. Albumin with hyaline and granular casts.

The convulsions are epileptiform in character and consist of a stage of tonic followed by a stage of clonic contractions. Patient becomes unconscious, pupils dilate, eyes and head turn to one side, usually left, mouth opens and tongue protrudes, and there may be a cry or sigh. Then comes a brief period of tonic contraction in which respiration ceases and patient is cyanotic. This stage lasts about one-half minute or less and is followed by general clonic

contractions involving all the voluntary muscles. (During this stage she should have especial care to protect from injury, but should not be forcibly held.) Slight respiratory movements now occur and the cyanosis gradually disappears. This stage lasts about three minutes and is followed by coma for a brief period in some cases while in others it exists until the onset of another convulsion. In favorable cases the woman wakes in from thirty minutes to an hour bewildered and with severe muscular soreness. In a little while if she is to have more the attack comes again. In the serious cases the attacks come even more frequently than thirty minutes.

During the attack temperature rises, pulse becomes rapid, blood pressure very high and urine suppressed or diminished. It frequently contains blood, and nearly always albumin, so much that it almost solidifies on boiling.

Pains usually begin if the convulsions are severe, or if they come during labor it is usually terminated rapidly. After labor the cases are usually more favorable. However, pregnancy is not always interrupted by eclampsia and it is not always necessary to terminate pregnancy in the treatment. De Lee reports the delivery of a living child in which the mother had two seizures within three weeks' time, and the convulsions so severe that the jaw was dislocated.

More usually the attack kills the fetus, the symptoms abate and the product is expelled in due time.

Diagnosis—It must be differentiated from epilepsy, hysteria and convulsions or coma due to cerebral diseases, diabetes or acute poisoning. Anemic convulsions can hardly be differentiated, but the general line of treatment is about the same.

Epilepsy is eliminated by history of previous attacks, the contracted pupils, diminished or absent reflexes. The urinary findings, low blood pressure and absence of fever.

Hysteria, by the atypical convulsive seizure, length of time it lasts, spastic contraction of muscle groups, mobile

pupils, absence of cyanosis, stertorous breathing, or urinary findings.

Spinal puncture may be required to differentiate the organic diseases of brain, and history of case usually excludes poisons.

Prognosis is always serious, both for mother and child. Over 20 per cent of women die. Mortality is higher in multipara than in primipara. The greater the number of fits the higher the mortality, being 50 per cent in cases where there has been over twenty convulsions. It is also graver when the convulsions and coma are prolonged with rising temperature and diminished urine. Mortality is highest during pregnancy and least during puerperium. Death results from coma, hemorrhage into brain or pulmonary edema.

In severe cases which recover prolonged mental symptoms may continue and even insanity result, or if hemorrhage has occurred, a paralysis.

Fetal mortality is influenced by period of gestation, at 7 months it is almost 100 per cent, becoming less as term is approached. At best it is 40 to 50 per cent, causes of death being prematurity, toxemia, asphyxiation, drugs administered to mother and injuries sustained during birth, especially in forced deliveries.

Treatment—There is no routine treatment of eclampsia, the cases vary so in severity. All pregnant women should be looked on as subjects of eclampsia, and if they are watched carefully the condition can be prevented in the majority of instances.

The rules of the hygiene of pregnancy should be strictly followed. Always on the lookout for evidences of toxemia, urine should be examined at least every three or four weeks during first six months and every two weeks during last three months, and if patient is not doing well, weekly or even daily examinations should be made. Albuminuria is most important finding and is never marked without evidences of toxemia. Diminished daily amount of solid and output is next in importance. Casts, unless granular or

cellular, are of little significance, and the percentage of urea is not reliable unless associated with albuminuria. A rising blood pressure is a warning but is considered safe under 150 m. m.

When first symptoms of toxemia appear, treatment must be instituted at once; diet regulated so that least nitrogenous food possible is given. Milk, vegetables, and fruits given with large amounts of water, unless there is considerable edema and heart already overloaded. Stimulate emunctories, plenty of fresh air and rest. If symptoms do not subside under this and patient grows progressively worse with convulsions, then the treatment is surgical, according to a number of authorities, while others still hold to the medicinal plan and treat expectantly for a short time, not usually over forty-eight hours.

Straganaff's treatment is expectancy with narcotics. Patient is placed in a quiet room disturbed as little as possible, given $\frac{1}{4}$ gr. morphine by hypo. and 30 gr. chloral by rectum every three hours, according to indication, which is convulsions. For each internal examination, catheterization or enema and convulsions, chloroform or ether is given.

Venesection and saline solutions, catharsis, hot packs, and toxin. If patient grows worse operative delivery is performed. *Veratrum viride*, thyroid extract, para thyroid extract, alkalies, amyl nitrate, lumbar puncture, all have their advocates in expectant treatment, but all agree in terminating pregnancy if patients do not improve in short time.

Deebhsen's dictum is, after first convulsion, put patients under anesthetic and deliver at once, and statistics show that rapid emptying of uterus after first convulsion gives best results. Peterson, collecting 615 cases of early delivery, as soon as possible after first convulsion, showed mortality of 15.9 per cent, as compared to 28.9 per cent treated conservatively. R. Friend reports from Berlin charity 551 cases delivered within one hour after convulsion with no mortality.

Another advantage of early delivery is that more children are saved. Methods of delivery depend first on period of

pregnancy; second, environment of patient; third, state of cervix; fourth, extraneous complications, as contracted pelvis, tumors, placenta previa, etc.; fifth, skill of the attendant, If cervix is dilated, forceps should be applied and delivery accomplished at once. In hard, rigid cervix, vaginal or cesarian section, some claiming latter the better operation, being quicker and with less shock, while others claim the same for the first.

Ether is the anesthetic preferred and as little as possible should be given.

In closing, I wish to make a plea for better attention to pregnant women so that not only eclampsia, but other toxemias and complications may be noted and the pregnant woman carried to confinement under the most favorable conditions possible.

Selected Articles

INFLUENZA.*

O. A. SCHMID., M.D.,
St. Joseph, Mo.

Not since Pfeiffer isolated the influenza bacillus in 1892 has a disease term been so widely used and misused, and because the disease is so varied in its form and clinical manifestations is this misuse apparent. Therefore we can find no more appropriate subject for discussion and study at this time. Holt and Wollstein in their investigations say that we can consider as influenza only those cases in which the bacillus of Pfeiffer are found. Yet the folly of such practice is at once brought to notice when we consider that the Pfeiffer bacillus is not easily isolated either in blood culture or from the secretions and can often be found in quantities in supposed normal individuals. For instance, these investigators discovered the organisms in 85 persons of whom 42 were suspected of having influenza and 43 were not—15 of the latter were nurses and physicians in intimate contact with patients suffering from the disease. I take it for granted that the latter 43 were not having symptoms of any sort. I have tried during the present epidemic (in a rough way, I admit), to find the bacillus in the secretions and out of 25 cases in which I made the attempt found them in but two.

Most authorities describe the disease in types depending upon the localization of the toxins. Leichtenstern's classification is as follows: 1. The purely toxic variety which is

*Read before the Buchanan Medical Society, St. Joseph, January 5, 1915.

subdivided into: (a) Simple influenza fever; (b) the nervous form. 2. Toxic inflammatory (a) The catarrhal respiratory; (b) gastro-intestinal.

Osler's classification is a more usual one: 1, respiratory; 2, gastro-intestinal; 3, nervous, and 4, febrile.

The usual English classification is as follows: Simple catarrhal fever; catarrhal fever with pulmonary complications; and fever with abdominal complications. But back as far as in the epidemic of 1848 Peacock stated that he found influenzal fever with catarrhal symptoms and even influenza without fever. Peacock's findings are plainly evident at the present time. Therefore, the latter classification is useless. A study of 848 cases of influenza recorded at the Massachusetts General Hospital showed the majority to be of respiratory type while a large number of patients at entrance so simulated typhoid that they were placed on enteric precautions.

All forms of the disease show certain symptoms and features in common and yet these symptoms are so various in each case that it will be convenient to describe first of all, the usual or simple catarrhal influenza may present symptoms that are common to the various types; therefore, it will be necessary to resort to considerable repetition later on when describing the disease under its classifications.

The first and most striking symptoms about influenza in all its forms is the suddenness of attack. I have seen, during the past few weeks symptoms and symptom groups which I did not realize were possible in this disease, namely:

Mrs. J., age 42, in good health, arose one morning with apparently nothing wrong and prepared the usual morning meal and of a sudden relatives about the house noticed her acting strangely. She suddenly became maniacal and this lasted several hours, and then she went through the usual course of a very severe influenzal attack.

Mr. N., salesman, left his home feeling well and stepped into his machine for a ride, and after being out not more than twenty or twenty-five minutes, was suddenly attacked

with violent headache and lumbar pains and was unable to drive his machine home. He had to be assisted from same. He then went through a severe clinically influenza.

In no few cases do we see some mild delirium which is rather sudden of onset. Goodhart, of England, states that he saw a case in which the patient, while out driving, without warning or previous complaint, fell from his cart in an insensible condition; was picked up, put into the cart, and he himself drove home, and although he had a broken rib, was so dazed he insisted on retiring without removing his clothes and was thought to be drunk. Another case he recites was that of a medical man, who, on going to bed in his usual health arose during the night to void urine fell to the floor and required assistance to get to bed again, after which he went through a severe form of influenza.

But in the usual case our patient presents himself with the statement that he was suddenly attacked with violent pains of bones and muscles over entire body; but lays especial stress upon the peculiar pains in back over lumbar region and of such character as to remind one that he is dealing with the prodromal back pains of variola. There are also frontal and occipital pains in head, which are intensified upon movement of head from backward and forward position, or on stooping, reminding one of a frontal sinus involvement. There is also complaint of pressure and fullness in the head; of dizziness and pain in eyeballs. The chest pains complained of are usually the same in all cases, viz.:

The patient will describe a course about the abdomen indicating the attachments of the diaphragm. He also places his hand over the sternum and explains that the pains are there. And states that all these pains are deeply seated and that he is afraid he has pneumonia. Usually about the same time a profuse coryza and watery eyes. The patient is often interrupted in narrating his complaint by a fit of uncontrollable harsh, dry, brassy cough. While these things are occurring he has chilly sensations, especially up and down

the spine. Often the patient will say that he can place his hand over a spot on his back which is constantly cold. There are paroxysms of inward burning sensations. A day or two later he may have a series of violent chills. But there is no regularity of onset of these chills and in fact in most of my recent cases they came on after two or three days of temperature.

The tongue presents a thick heavy coat and is itself thick and tremulous and indented by the teeth. The breath has a peculiarly offensive odor and there is nausea, sometimes vomiting. Patient complains that he does not care for nourishment; and when he does partake of same, says it does not smell or taste as it should and often complains there is no taste at all. The patient suffers from a sudden prostration altogether out of proportion to the duration or apparent severity of his illness.

The temperature in influenza is as varied as the other symptoms and in no other infectious disease is there a greater temperature range. A great many have subnormal temperatures in the very beginning. I now have a patient running a temperature of 96 to 97 F. Others range from normal temperature to that of 103 deg., which continues from three to six days and then subsides, leaving the patient as weak and depressed as if he had gone through an extended serious illness. Oftentimes there occurs great body loss. Few cases have a tendency to recurrence of fever. About the time the temperature has subsided there begin drenching sweats which last for several days, and have an odor similar to that of an extremely septic condition. During the height of the attack, I have found some who were extremely drowsy, this existing especially in children. I had one case in a dentist's family in which the child slept almost continually for two days and the doctor called up and asked whether or not medication contained a narcotic.

The foregoing is the symptom complex as they might occur singly or all in any simple catarrhal case even when no complications exist, and these symptoms may be quite alarm-

ing. This brings us to the disease under its various forms.

The Respiratory Form—This is by far the most common form of the disease, but the question often arises whether or not this additional symptom and pathology is a part of influenza or is a complication thereof. In this form there is the usual harsh, dry cough. The pharynx shows a highly congested condition, and while there may be no evidences of pneumonia, the air seems to enter the small bronchi very badly. There may be even loud bronchial rales indicating some congestion. This is the usual simple catarrhal type of moderate severity. Take these symptoms and add, scattered or even localized, areas of dullness—sometimes amounting to almost absolute flatness on percussion—with these areas full of loud sticky rales that makes one sure he is dealing with an acute pneumonia. Often with flushed cheeks and high temperature, but not an extremely high respiratory rate, but with respiration somewhat embarrassed and one deals with a severe pulmonary type of influenza. This condition will often increase in intensity and extend over a whole lung or considerable portion of it. Delirium supervenes and the pulse mounts up and the case terminates fatally without any physical evidence of consolidation being present. Oftentimes we will find areas of dullness with rales, with high temperature, and rapid respiration and find on the next day that these symptoms have disappeared, viz.:

Miss D., age 25, on afternoon of December 22, while out shopping suddenly began coughing and complaining of severe headache. She returned to her home and that evening complained of severe chest pains and soon had a severe chill. I was summoned hurriedly, relatives stating that patient had difficulty in breathing. Temperature 102.6 F., pulse 100, respiration 22. Physical examination of chest showed the entire right side, posteriorly and anteriorly, dull on percussion, in fact nearly absolute flatness, breath sounds barely audible, or not at all in some areas. Occasionally loud rale over apex. High in the axilla I found a slight indistinct

pleuritic rub. I felt sure I was dealing with a pleurisy with an effusion and told the family so. I returned the next morning prepared to aspirate to confirm my diagnosis. I found the chest signs very much improved and dullness somewhat lessened. I decided to wait with the aspiration, and that evening found the chest signs entirely cleared up with the exception of a few bronchial rales. Patient went through a moderately severe clinically influenzal attack and a few days later was up and about, despite my advice.

It is in cases under this head that we often find a severe laryngitis with complete loss of voice; with a complaint of severe lancinating pains in throat.

Expectoration is usually scanty at first and later becomes profuse and of a mucopurulent character and often blood-streaked. Actual hemorrhages may occur without previous signs of pulmonary condition being present. I have seen one case expectorate a considerable amount of blood and careful examination of chest following recovery of disease showed no signs of other trouble. According to some investigators, the influenza bacilli alone were found. Others found pneumococci. Giving rise to the argument that in some cases we are dealing with complications and not the primary disease. Yet when we consider that on the very day that the patient first notices his illness, which is clinically a true influenza, with the influenza bacillus present in the secretions, and we find these symptoms on the first day or two after onset we must believe that the complaint is the primary disease and that we have not had time for such severe complications to take place.

Gastro-Intestinal Type—In this type of the disease we have accompanying the usual symptoms of the disease either a severe constipation which is the rule, and is very obstinate or rarely a diarrhea. There is complete loss of appetite and the tongue is more coated than the average simple case. In a few I have seen a very red tongue with patches of grayish spots and sometimes a tongue very near a strawberry type. The patient complains of some tender points

over abdomen and there is some tympanites. There is extreme nausea, seldom vomiting. In not a few of these cases one is reminded that he may possibly be dealing with a typhoid patient because of the drowsiness and headache and severe pains in gastric region with occasional blood-streaked stools and feeling described as emptiness. The Germans report observations in which Peyer's patches and mesenteric glands were swollen. Ulceration of the jejunum has been reported by Kuskow. The influenza bacilli were isolated from the pus of an appendix abscess by Adrin. Fisch and Hill have reported a case of purulent peritonitis with isolation of the influenza bacillus in pure culture.

Nervous Type—Of this type I have had very little experience, except in the case of acute mania already cited. In addition to the headache delirium, there is restlessness and insomnia. Cases have been reported with hemiplegia, myelitis, encephalitis and paralysis, and more frequently with neuralgia and multiple neuritis. And according to Leichtenstern's report of such cases, scarcely any portion of the nervous system escaped injury from the influenza bacillus and its toxins.

Complications and Sequela—Of the complications, pneumonia is the most dangerous and is most frequent and may be broncho or lobar. In broncho pneumonia as in most cases of such, a very close examination must be made, because the areas of consolidation are often so small that areas of dullness may be overlooked. I have already spoken of the frequency of multiple areas of consolidation. In eleven fatal cases reported by Smith, bacilli of Pfeiffer were found in the exudate, in culture, and sections of the pneumonic foci; in one case four lobes showed foci of consolidation, three lobes three times, two lobes once and one lobe six times. The right upper lobe was involved in five cases.

Cardiac Involvement—Just where to place the frequent heart involvement that often follows influenza (since they are found in apparently simple cases, but most often they follow the respiratory form), remains a question. The pa-

tient presents no stethoscopic signs or symptoms of cardiac involvement, except that he complains of occasional sharp pains around cardiac regions. Often one finds an accentuated first sound but usually all sounds are normal. It is later that the symptoms of cardiac involvement presents themselves as follows: There is a feeble, irregular, rapid pulse. The cardiac area is not increased on percussion, but the sounds are indistinct. There is after this, a faint feeling accompanied by considerable pallor. After several days rest and patient makes attempt to get out of his bed because of his feeling much better, he finds he becomes faint again and pulse often mounts up. In some cases I have found a rather low pulse, one ranging from 50 to 60 and patient feeling very weak.

Complications of meningitis and nephritis are rare. Infections of the joints have been reported in which the influenza bacillus was found. Sometimes we see chronic bronchitis and even chronic influenza following acute attacks, and of course, as we all know, we have those frequent complications as otitis media and abscesses in the nasal accessory sinuses.

In fact, when we speak of the complications and different types of influenza, it seems to me that we may have manifestations or complications of any, or all mucous or serous surfaces and even some of the glandular structures may be involved. (And unless we can get a definite bacteriological diagnosis it is often the question whether we are dealing with complications or the disease itself with local manifestations.)

Diagnosis—The diagnosis of influenza, in a great majority of cases usually presents no difficulty. Usually we see the disease during an epidemic. The abrupt onset with alternating flashes of heat and chilliness is typical and aids us in our diagnosis. Then there are the severe aching, the soreness of eyeballs and headache and distressing pains over the body. If doubtful, the bacillus should be looked for in the sputum and the secretions.

Influenza is the dumping ground for diagnosis of many obscure symptoms and it is here that I want to state the misuse of the term. Whenever we get a history of malaise, chilly sensations and muscular soreness with headache, there is a tendency to immediately think of influenza and such practice is not only unscientific but can, and often does, lead to serious error and grief to the attending physician. The warning can not be too frequently given that any beginning sepsis or localized abscess formations may present such prodromal symptoms. Another fault, and a serious and most frequent fault in our diagnosis, is that we are inclined to call every severe cold and coryza, influenza, and it is here again that the misuse is apparent. How many acute exacerbations of tuberculous origin are called influenza. I believe that when a patient presents himself with a history of malaise, and achy pains over chest and shoulders, with possibly some dull headache and chilly sensations, and with frequent persistent paroxysm of coughs, we frequently make serious error in immediately diagnosing our case as influenza without a thorough examination of the chest. Whenever a patient presents himself with the above symptoms and tells me that he has had three, four or even five such attacks, I look with suspicion upon the case and inquire minutely into the history of such attack, and closely examine the lungs and many times have I found such cases to be of slow progressing tubercular process. Yet when I make such argument, I must admit I have seen cases wherein the history showed, and where I have often seen one member of family who had, what appeared to be, nothing but an ordinary cold or coryza and within three to four days see one or more members of same family have a very severe form of influenza. Such occurrences, when seen so often, makes one believe the ordinary cold was caused by the Pfeiffer bacillus.

The differential diagnosis from typhoid, it seems to me, should offer no serious obstacle, since in influenza our temperature record is of short duration and is not the characteristic typhoid temperature. If in case the temperature

should persist and be high, a Widal should clear up our diagnosis. Again the bacillus of Pfeiffer should be looked for in the bronchial and nasal secretion. Pneumonia is often the stumbling block in the diagnosis of influenza and has frequently been mistaken for such, when the chest signs have been unusually severe. But pneumonia is usually unilateral, while in influenza, the symptoms are usually bilateral. In the former there is usually a larger and more distinct area of dulness and is usually confined to one lobe or area, while in influenza we may have scattered areas of dullness. In the former, also, there are more distinct rales, while in influenza, the rales are not of a subcrepitant character and are not constant and usually clear up within 24 to 48 hours.

Etiology—Etiology of influenza has been found, and is generally accepted today as the bacillus of Pfeiffer. But this remains in doubt to some because the bacillus has been frequently found in quantities in fatal cases of measles, diphtheria, and scarlet fever, and similar organisms have been found in conjunctivitis and whooping cough. Even in patients suffering from influenza clinically, often the influenza bacillus is not found, and this has had a tendency to increase this doubt. Cushman, in an epidemic, reported the presence of the pneumococcus in 46 out of 49 cases, and so all sorts of cocci have been reported found in acute infections resembling influenza. Therefore, because of doubtfulness of our bacteriological findings, we are still in the dark relative to a true diagnosis in a great many cases resembling influenza. Clinicians are described under three heads, depending upon the stand they may take relative to what part the influenza bacillus may play as to the cause of the disease, viz., those who call any acute cold influenza; secondly, those dwelling upon the widespread occurrence of the bacillus in other diseases. Even when they find the influenza bacillus in the secretions of the suspected case, questions whether these bacilli may not be saprophytes, and hesitate to call the disease influenza. The third are those who take the stand

that where the influenza bacillus is found, there is influenza.

Yet we must recognize when we pursue the findings of some investigators that many of our cases of influenza are truly caused by the influenza bacillus alone. Horder reports a case of endocarditis in which the influenza bacillus was isolated from the blood four times during the interval of six weeks. The influenza bacilli were again isolated from the valve in pure culture at autopsy. Ghedini cultivated this organism from the blood in eighteen cases out of twenty-eight and from fourteen spleen punctures, found the bacilli in eight. He insists that the blood culture must be taken during the fever period. The disease occurs in epidemics and pandemics and seems every so often, as every ten to fifteen years, to sweep the whole country. In such epidemics as 1892 occasionally sweeps the world. Every quarter of the globe has been visited by the disease. Influenza is not a new disease, since it was described in England as far back as 1650 when it swept England with about the same characteristics as our present epidemic.

Modes of Conveyance—The disease usually follows the ordinary lines of human and commercial travel and is undoubtedly communicable by contagion. Just what the mode of entrance of the bacillus into the body is, is not yet known, but it is undoubtedly through the respiratory tract. Some believe that the primary point of infection is often the conjunctiva, others pretend that the alimentary canal is the host of the bacillus.

Predisposing Causes—All persons are susceptible to the contagion. Age has some influence, the period of greatest susceptibility being from the twentieth to the thirtieth year, the very young are least susceptible. Those whose vitality has been lowered by some chronic affections are usually the most susceptible.

Immunity—None are immune from influenza and one attack seems to predispose to another, since it is very frequent to find reoccurrences with each epidemic.

Prognosis—The prognosis is usually good in the milder forms. The fatalities occurring in most parts in the respiratory form and in complications with pneumonia and the heart. It acts very severely in those individuals suffering from tuberculosis, valvular disease of the heart, and in nephritis. The average death rate being about 2 per cent.

Treatment—Prophylaxis—No drug, so far known, is of prophylactic value. Urotropin is said to be of value as a prophylactic, but this is very questionable unless it would be so in regards to the meninges and the spinal canal. I have given it in a few exposed to the disease and found two who had taken it that developed moderately severe cases of influenza.

In the study of one pandemic, according to Smith, it was shown that new districts became infected, when visited by persons with the disease.

Parsons reports that of several thousand persons engaged in deep sea fishing in the North Sea, not one was known to have contracted influenza at sea, and also showed that epidemics occurred on board vessels only after communication with another vessel. It will be interesting to note later just how the disease has effected Europe, if at all, during this epidemic and whether the great decrease in amount of travel and commencial intercourse has had any effect. It has occurred to me, from what meager information could be obtained, that the disease and its complications has been most severe in the Northern and Lake cities and the two coasts. Study of reliable sources of information will interest us and we may determine that it has followed the main arteries of travel. Isolation is difficult in the mild cases because of the doubt of diagnosis. It has been my practice with my cases to have them use old cloths or pieces of gauze in collecting the secretions of the nose and having them burned. In sneezing and coughing, the patient is to protect the face with these cloths. I have also been in habit of advising members of the family, in contact with the disease, to use sprays

into the nose and to use some sort of an antiseptic mouth wash. Isolation of the most severe cases is recommended.

Patient should be placed in bed as soon as diagnosis is made and put upon a light and nutritious diet and instructed to drink large quantities of cold drinks. Ten grains of Dover's powder is given at bedtime on the first day of attack; this is followed up by broken doses of calomel. The salicylates seem to be the drug of choice; I usually give it in the following combination: Acid acetylo-salic, grains 5; sodium benzoate, grains 2; camphor monobromate, grains 2, in capsule every two hours. I have no faith in the use of quinine in these cases. It seems to increase the nervousness of the patient and adds to the discomfort of the headache and sleeplessness. If the sleeplessness demands attention, I usually give some hypnotic, as sulfonal. For the coryza I usually use in the nose frequent applications of 10 to 20 per cent solution of argyrol; following this I usually spray the nares with some antiseptic solution, such as Dobell's solution or liquor antisepticus compound alkaline; better still, a spray of some oily solution. I usually use albolene spray solution. Steam inhalations of tincture of benzoin compound are serviceable. The most difficult symptoms to control is the distressing cough and I have found nothing that relieved this condition to any extent, although I frequently use the following: Ammon. muriate, gr. 10; potass. iodide, grs. 3; fl. ext. glycerrh., min. 10; syrup of prunus virgin, q.s., drs. 1, every two or three hours. If the cough still was very distressing, one-eighth of a grain of codeine phosphate was added. The most serviceable drug that I have found, perhaps, was the creosote carbonate. The temperature, when it was present to any degree, was controlled in the usual way. The profuse sweating, when present, was usually easily controlled, when necessary, by small doses of atropine. The vaccines I have found of little use. I believe this is generally accepted to be the fact.

It is well here to voice a protest against the promiscuous use of stock vaccines. I heartily disapprove of using a gun-

shot vaccine containing the products of from four to eight different kinds of bacteria in cases diagnosticated from symptoms alone. It seems foolhardy to me to follow this practice unless we have a definite bacteriological diagnosis. If I had a severe case of pneumonia without a definite and sure bacteriological diagnosis I would certainly hesitate to have the patient go through even a mild negative phase unless I was certain that the end results would effect the infecting micro-organism. Such practice is not only not good practice but is certainly unscientific.

Respiratory Type—This type is treated as in the ordinary type, except that when the bronchial symptoms are very severe and there is considerable congestion, some counter-irritation to the chest is serviceable. The one I find most useful, being in the form of a mustard plaster. Of course if pneumonia complicates the trouble, it should be treated as ordinary pneumonia.

Gastro-intestinal Type—This form also resists treatment to a degree as in the other forms, small broken doses of calomel are given, patient placed upon a liquid diet and encouraged to drink large quantities of water. Champagne in small amounts will frequently take care of the vomiting. Another preparation that I have found useful in these cases, is the bile salts combined with pepsin and pancreatin.

If circulatory symptoms arise, the patient is kept absolutely quiet in bed and strychnine, one-fiftieth grain doses, given three times a day.

Convalescence—The convalescence gives the attending physician his greatest worry, as it is usually long compared with the severity of the disease. And because of the great debility and prostration, the patient complains so often that he does not recover as quickly as he thinks he should. He can not understand why this should be. And while he may not be confined to his bed, he should be confined to his home and warmly clothed but in a room well ventilated. Good nourishing diet with some supportive treatment should be

given until patient feels quite himself again. A strychnine tonic in these cases is never amiss.

Since this paper was written, Mathers, of Chicago, has made some valuable bacteriological findings in regards to our present epidemic. He has found a hemolytic streptococcus in the secretions of the nose, the pharynx and bronchi. But I believe we must make further search before we can accept conclusively bacteriological findings of these secretions. From what has been quoted above, influenza is a general systemic infection and blood cultures and cultures taken at post-mortem will determine the true etiology. During any systemic infection, no matter what its nature, we have increased numbers of all sorts of bacteria in the above secretions. For instance in any sputum examination of an advanced tuberculous condition we find streptococci and staphylococci and even influenza which often predominate. Yet from our symptoms of the disease and the extreme prostration following it, Mathers' findings seem to be of a great deal of importance to us.—*The Medical Herald*.

Extracts from Home and Foreign Journals

SURGICAL

OPERATION FOR ANEURYSMS OF EXTREMITY.

The patient whose case is cited by Bernheim had an aneurysm of the right popliteal artery, of one month's duration, but which was increasing in size somewhat rapidly. At the operation a spindle-shaped tumor presented and was opened on its dorsal aspect, revealing only two openings, the entrance and exit of the popliteal artery, the two points being distant about an inch and a half from one another, and only the faintest sign of a groove being apparent between them. The popliteal vein was so densely adherent to the sac that it was impossible to separate it without taking part of the sac wall, which was done. A reconstructive Matas endo-aneurysmorrhaphy was impossible, hence Bernheim removed about 15 cm. of the internal saphenous vein from the affected leg at the knee and, after proper preparation, interpolated about 15 cm. of it between the severed ends of the popliteal artery. Only the ends of the sac were cut away, the remainder being left to be folded around the transplant as a partial reinforcement. Carrel's end-to-end suture was used. At the conclusion of the suturing blood went through the graft in a normal manner. An uninterrupted convalescence ensued. All pain and discomfort in the leg disappeared and a curious operative "dead feeling" of the great toe had given way to a normal feeling. Pulsation could be felt all along the vein graft as well as in the arteries of the foot.—*The Journal of the Amer. Med. Asso.*

THREAD DRAINAGE.

Chaput expatiates on the advantages of one or more threads, silk fibers, wires or rubber pencils from 3 to 7 mm.

in diameter to drain wounds, abscesses and fistulas. He insists that the drainage is always good because the thread passes through openings very large in comparison to its diameter; there is no dead space, and the lips of the wound fit around the thread drain like a valve, preventing ingress of air. Abscesses and other lesions heal more rapidly than with tube drains; leave no traces. The abscess can be punctured at several points and a small silk thread introduced at each, thus facilitating with the least disfigurement. He reviews his extensive experiences with this filiform drainage, as he calls it, in abscesses of the breast and anus, tendon-sheath phlegmons, suppurating wounds of the knees or other joints, in peritonitis, in tuberculous bone and joint affections, and after hysterectomy and other operations. A number of minor technical points are mentioned for each of these applications. Among the advantages extolled are that the filiform drains leave no scar, protect against sloughing of tissues, are not so painful as drain tubes, avert complications, and protect against infection from without. They heal up a purulent pleurisy in a few days, without leaving a fistula or requiring resection of ribs. They do not keep the wound discharging, like tube drains, and he found that all wounds and cavities, aseptic or infected or tuberculous, healed up remarkably fast, as a rule in from ten to fifteen days.—*The Journal of the Am. Med. Asso.*

A SIMPLE METHOD OF REMOVING FLAT FOREIGN BODIES FROM THE TRACHEA OF THE YOUNG CHILD.

The method to be described is designed for the rapid removal of flat foreign bodies from the trachea of infants and children up to the age of three years. To the beginner no operation is more difficult than the removal of foreign bodies through the small bronchoscopes designed for infants. To the expert the operation is sometimes fraught with difficulty, because it is not easy to work through a 4 mm. tube unless the child is asleep, which adds to the danger of trach-

eoscopy. Flat foreign bodies, such as watermelon seed, seldom pass into the bronchus of an infant or young child. They lodge in the trachea almost invariably, and necessitate a tracheoscopy for removal. To obviate the difficulties of working through a small tube, I had a small Jackson separable speculum made which measures 9.5 cm. in length and 10 mm. in diameter, with the light 1 cm. from the end of the tube. With the handle detached the speculum is passed into the throat, with the child's head straight on the table. The epiglottis is pulled up, and, with the child breathing, the trachea can be explored to the bifurcation. A foreign body can be easily seen, and if it is light in weight, as a watermelon seed, it moves up and down with expiration and inspiration. Forceps, introduced between the vocal cords, are made to grasp the object, which is quickly removed. No anesthetic is used. Atropin is given to dry up secretions. In the removal of two watermelon seeds from the trachea of young children I was surprised at the excellent view of the entire trachea with the head straight on the table. I have no doubt that this method will work equally as well with foreign bodies of other shapes. Thus far I have had occasion to use it only with flat foreign bodies.—*Maryland Medical Journal*.

INTRAVENOUS INJECTIONS OF CHLORAL IN THE TREATMENT OF TETANUS.

M. Roch and Mlle. E. Cottin (*Gazette Medical de Paris*) report the case of a boy aged 13 years in whom this method of treatment was successfully employed, in addition to the administration of chloral by the mouth and by the rectum. The patient weighed 23 kilograms and in the course of 20 days received 156 grams of chloral, of which 7 were administered by the mouth, 112 in suppositories or in enemata, and 37 in intravenous injections. The effect of this method of treatment was a remarkable control of all the spasmodic phenomena. As regards the proper solutions of chloral

when these are given intravenously, the author states that they should not be of greater concentration than 5 per cent, and should be allowed to flow into the veins very slowly.—*Medical Progress.*

MEDICAL

CHENOPODIUM IN THE TREATMENT OF UNCINARIASIS.

In the *Journal of the American Medical Association* of November 6, 1915, Bishop and Brosius reach these conclusions:

1. The method of administration of chenopodium is simple, and is attended with less inconvenience and discomfort than is thymol. This would give the drug an important place in the field work in uncinariasis.
2. Chenopodium can be given at shorter intervals than can thymol, and a cure can thereby be more quickly established, which gives it a greater economic value.
3. Chenopodium is non-toxic in therapeutic doses.
4. Chenopodium is a more efficient vermifuge than thymol in the treatment of uncinariasis.—*The Therapeutic Gazette.*

COPPER SULPHATE TREATMENT OF TRACHOMA.

Prince's copper sulphate treatment of trachoma and allied conditions is carried out as follows:

A 10 per cent solution of copper sulphate in glycerin is used as a mother liquor. From this the patient is directed to make an aqueous solution daily by adding one drop of the mother liquor to nineteen drops of water. This 1:200 copper sulphate solution is instilled into the eye, three, four, or even six times a day. If it causes too much reaction, it is further diluted. On the other hand, as the eye gets accustomed to it, the solution is made more and more concentrated. Prince, however, states that some of his patients used a solution of 1:50 or even stronger. The aqueous solution does

not seem to keep well, and hence should be made up fresh every day.

This treatment was first devised by Prince, of Springfield, Ill., who found it to work well in trachoma and its complications (corneal ulcers and pannus). He also used the undiluted 10 per cent glycerin solution as an application after expression in trachoma. The diluted glycerin in Dr. Alexander Duane's hands has given excellent results in non-trachomatous follicular conditions.—*Critic and Guide*.

MAGNESIUM SULPHATE IN NON-AMEBIC DYSENTERY.

Dr. F. Wyatt-Smith (*British Medical Journal*, November 27, 1915), has this to say: In February, 1898, when our forces engaged against the Waziris on the northwest frontier of India were being exhausted by dysentery, you were good enough to publish my experience in South America in the treatment of non-amebic dysentery by dram doses of magnesium sulphate every two hours. I found it to be a specific; and the observation was confirmed by correspondents at the front, by the medical officer in charge of the goal at Mauritius, and later in the South African war, by friends engaged in it. The observation is not new, for a correspondent in Belfast pointed out that it was published at least three hundred years ago.—*Critic and Guide*.

MOBILIZATION OF THE LUNG IN TREATMENT OF PULMONARY TUBERCULOSIS IN EARLY STAGES.

Kuhn has now ten years of experience with his suction mask, a device worn over the mouth and nose which by valvular action impedes inspiration while permitting free expiration. The consequence is that the air in the air passages becomes rarefied, the muscles of chest and neck work harder, and the upper part of the chest is mobilized as under no other conditions. He says that his mask has been applied in thousands of cases, and the lungs and diaphragm thus ex-

exercised provide better conditions for recuperation and cure of tuberculous processes than any other means can offer. The blood and lymph flow more rapidly and abundantly through parts thus being exercised, while the conditions with the suction mask prevent any tugging on the tissues and ward off all tendency to hemorrhage. The lungs can be vigorously exercised in this way in cases in which the slightest physical exertion otherwise is contraindicated.

The suction mask also realizes a kind of autoinoculation therapy. The temperature is a delicate index of the action of toxins, and hence the record of the temperature is the guide as to the practicability of the suction mask in the individual case. By mobilization of the lung in this way, the blood and lymph sweat through it and wash out bacterial products into the general circulation, thus realizing what amounts actually to a course of tuberculin treatment, with resulting production of antibodies. When the slight rise in temperature shows that toxins are being swept into the general circulation, he then gives the organism a chance for complete rest while the production of antibodies is going on. His mask thus aims to accomplish the exact reverse of the induced artificial pneumothorax, and his experience with thousands of cases has demonstrated, he reiterates, that this mobilization treatment in the early stages is the most promising of all methods of treating pulmonary tuberculosis, and that some contrivance like the suction mask seems to be the means best adapted for the purpose.—*The Journal of the Amer. Med. Asso.*

OBSTETRICAL

PAINLESS CHILDBIRTH.

On Wednesday, March 1, 1916, at Carnegie Hall, was held the first Birth Control mass meeting. The oratory—as much as we were able to endure of it—was a fiasco, but the immense audience, which filled that huge hall from the or-

chestra to the back row of the topmost tier, loudly applauding whenever they caught a bold word in favor of birth control, was eloquent testimony to the fact that at last the people insist on knowing the ways and means of preventing conception.

Not long ago, the profession shook its dignified head when Twilight Sleep settled over the land, but the lay agitation for Dammerschlaf plainly showed that the people had grown tired of biblical curse of maternity in Genesis III, 16, "I will greatly multiply thy sorrow, thou shalt bring forth children,"—and were demanding painless childbirth. Whether morphine-scopolamine is the ideal combination matters little, for the proper drugs can be found later, but it is of great social significance that women refuse any longer to bear children in agony—and they are wholly right. After many centuries of travail, the mothers of the race have finally learnt that there is such a word as eutocia in the medical dictionary.

Carl Henry Davis, associate in obstetrics and gynecology, Rush Medical College, is only lukewarm for the Frieburg method, but he is most enthusiastic for nitrous oxid-oxygen analgesia in labor, and has written a little volume on the subject, which has recently been published by Forbes and Co., of Chicago. About twelve years ago at the Presbyterian Hospital, the use of nitrous oxid and oxygen in obstetrical work was begun by Dr. Davis' chief, J. Clarence Webster, and the present production voices their ideas and recounts their results.

"It is the right of woman," says Dr. Davis, "to demand relief from the pains of childbirth, and it is the duty of the physician to relieve her of these pains in the same spirit that he relieves other suffering. The pain of labor causes shock, and is, I believe, more dangerous than the proper use of any of the analgesics now employed. According to the author, the analgesic of choice is nitrous oxid-oxygen.—*Medical Review of Reviews*.

CESARIAN SECTION.

In 1879, Felkin, an African traveler, witnessed a cesarian section performed by the natives in the heart of Uganda. The woman was held in a reclining posture by two men. At her side was a gourd of banana wine, and she was half drunk. The operator stood at her left. First he washed his hands in banana wine, then he washed the belly with the same—active antiseptic measures. With a short curved knife he made one incision through the belly, right into the uterus and quickly delivered the child alive, an assistant holding the uterine incision open by hooking his fingers into it. By uterine massage, the placenta was expressed and hemorrhage controlled. Several bleeding points were cauterized with a hot iron. The cervix was dilated from above with the fingers. The assistants then turned the patient on her side to allow the blood to drain out of the peritoneal cavity, the intestines being retained by a square of plaited twigs, after which the belly was sewed up with pins and figure-of-eight sutures. The pins were made from bamboo stick, the sutures from reed fibres. The wound was covered with a paste made of aromatic herbs. The patient recovered in 11 days, having run a mild febrile course. Without doubt, this operation must have been performed for many centuries for the technique to be so perfectly developed.—DeLee, *Illinois Medical Journal*.

Editorial

PUBLISHER'S NOTICE—The Journal is published in monthly numbers of 48 pages at \$1.00 a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money order, draft, or registered letter, should be addressed to the Business manager, C. S. Briggs, M. D. corner Sumner and Union Streets, Nashville, Tenn.

All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

THE PRESENT HIGH STANDARD IN MEDICAL EDUCATION.

The present high standard in medical education is the result of the hard work of a relatively small number of physicians earnestly interested in an altruistic work. Not only the medical profession but the public should feel deeply grateful to these unselfish men; the profession, because of the higher plane it will attain, the public, because of the better service it will get.

But, however much we respect those men and admire the results of their efforts, we can not help but feel that the present high standard is far from an absolute good.

We hope there are some very weak links in our chain of reasoning, but all evidence at hand points to the fact that the future dangers to be mentioned below are, or rather will be, actual and not fanciful. In making these observations we do not wish to be classed with those who think there is danger of the physician becoming "overeducated." No such danger ever did or ever will exist, though there is some danger of the education running too deep in wrong channels.

It is not the danger of overeducation that threatens but rather the danger of undersupply of the educated product—a lack of physicians; and the evil effects of this as we see them are as follows:

1. A medical aristocracy.
2. A scarcity of physicians in rural communities.
3. More extensive use of patent medicines.
4. A great increase of irregulars.

Taking these headings seriatim:

1. The study of medicine will be impossible for many. The higher preliminary education, the longer time in the medical school, and the final hospital work all together mean 6-10 years time, and those dependent on others can hardly expect the most generous father to bear the burden of expense unless he is fairly well to do. Some boys, of course, will work their way through college, but the number must necessarily be relatively small in this day and time when there are so many fields of activity open to young men.

2. Men will not spend so much time and do such hard work in order to prepare themselves to practice in rural communities. Furthermore, the man raised in luxury and affluence will seldom voluntarily give up that mode of life for the hard life of a country doctor. Our future graduate will head for the city, and his aim will, of course, be some specialty. Since many will go to cities the competition will be great. This will drive some to the smaller towns, but hardly to communities of 200-500 people. This simply means such small communities will suffer for want of doctors. Wherever there is one physician, there should be at least two, since otherwise there is no competition and the people are the sufferers. In the near future, however, small communities will be glad to have anything looking like a doctor.

3. If physicians are scarce, the use and abuse of patent medicines will become even greater than at present. This is so evident that it would not be surprising to find patent medicine manufacturers the strongest advocates of the high standard in medical education.

4. If irregulars flourish and get rich in our cities where many worthy young doctors are almost starving, what must be expected later in small communities where there will be no doctors. To answer this is unnecessary because you have

already pictured in your mind's eye the swallow-tailed fake plying his trade and collecting his fortune.

(The above are some of the dangers as we see them. They may not be real, they may be the product of imagination, but we hardly think so.)

Since writing the above we have read an article by Gordon Wilson—J. A. M. A., April 8, 1916—in which he points to a future undersupply of physicians. To avoid this he suggests two types of medical school, one of which types will train its students for teaching, research work, sanitation, etc., as a representative of which he mentions Johns Hopkins, the other type, represented by the average first class school of today, will train its students for actual practice. We hardly think this plan feasible, except insofar as every medical school should offer special lecture courses for students intending to take up teaching, research work, etc. No medical school should be allowed to lose sight of the ultimate aim of all medical education—the prevention and cure of disease. And in order that no such weakness may develop among our full-time professors—we have seen evidences of this very weakness—the regular course of study, hospital work and several years of practice, should be the *sine qua non* of a full time professorship of any subject.

In this same article he shows how the freshman enrollment of students in the Baltimore schools, aside from Johns Hopkins, has decreased from 265 in 1905 to 44 in 1915. (Here in Nashville there has been a similar decrease, the 1915 freshman enrollment being about 30, while in 1905 the enrollment was at least 180.) He furthermore shows in two tables, as an actual fact, the danger we mentioned under caption (2), comparing Johns Hopkins with the other Baltimore schools his tables show that graduates from the former seldom locate in rural communities.

The questions we would raise are: 1. how will our rural districts fare with few or no physicians and weak, inefficient laws against quacks and quack medicines, and (2), will the

advocates of the high standard be satisfied for the present until we know more definitely the remote effects, or will they continue to raise the standard regardless of the public welfare?—W. T. B.

THE GALLOWAY MEMORIAL HOSPITAL.

The recent campaign in Nashville to raise \$200,000 in ten days for the completion of the Galloway Memorial Hospital, was a grand success in every respect. Not only was the required amount pledged, but \$70,000 in addition. There were more than 500 men and women working hard to raise the necessary amount and while in the mid-part of the campaign the outcome seemed dubious to some, never once did the general enthusiasm waver. While the work of all interested was commendable, that of the Vanderbilt student body and the local nurses, both those in training and the graduates, deserves special mention. The large gift of \$20,000 by Miss Johnson, of Gallatin, and \$60,000 by Mr. J. P. Moore of Franklin, as well as the \$12,000 donated by the N., C. & St. L. Railroad, played a large part in the final outcome.

The unit of the hospital for the completion of which this sum was subscribed should be rushed on to completion, not only because Nashville is in sore need of more hospital space, but also in order that the Vanderbilt medical students, who have worked so hard for the hospital, may get the benefit of the better teaching facilities this institution will offer.

With this hospital and the million-dollar endowment acquired a few years ago, the Vanderbilt Medical School should soon stand forth as a power in the medical education of the United States.—W. T. B.

EXTRA COPIES.

Many physicians will receive sample copies of the NASHVILLE JOURNAL OF MEDICINE AND SURGERY and be asked to subscribe to this old, sterling publication. We offer

as premiums to new subscribers a handsome certified clinical thermometer in case with chain and a ten-weeks trial subscription to *Harper's Weekly*, a publication that presents war pictures and war news of the greatest interest to everyone fortunate enough to obtain copies. The Journal for one year, *Harper's Weekly* for ten weeks, and a reliable clinical thermometer, all for \$1.45. We trust our readers will appreciate the advantages we offer and send in their names as subscribers. The Journal is essentially an independent, non-partisan publication, devoted to the needs of the general practitioner and open always to communications for the benefit of the medical profession. Let us have your subscription without delay.

OFFICERS OF TENNESSEE STATE MEDICAL ASSOCIATION.

The officers elected for the ensuing year were: Dr. C. N. Cowden, of Nashville, president; vice presidents, Dr. C. J. Carmichael, Knoxville; Dr. J. T. Moore, Algood; Dr. J. L. McGehee, Memphis; secretary, Dr. Olin West, to succeed Dr. Cowden as member of the board of trustees, and treasurer, Dr. J. A. Gallogher; the two latter of Nashville.

PRELIMINARY PROGRAM AMERICAN PROCTOLOGIC SOCIETY. EIGHTEENTH ANNUAL MEETING, DETROIT, MICH., JUNE 12 AND 13, 1916.

Headquarters and Place of Meeting, Hotel Slater.
The Profession is Cordially Invited to Attend All Meetings.

Executive board meets at 11 a. m.

First regular session at 2 p. m.

Annual Address of the President—Subject: Why Proctology has been made a Specialty. T. Chittenden Hill, Boston Mass.

PAPERS.

- 1—A Review of Proctologic Literature for 1915. Samuel T. Earle, Baltimore, Md.

- 2—Post-Operative Treatment in Rectal Surgery. Wm. H. Stauffer, St. Louis, Mo.
- 3—Auto-rectal Injuries. Samuel G. Gant, New York City, N. Y.
- 4—Some Observations on Hernia in Relation to Intestinal Stasis. Wm. M. Beach, Pittsburg, Pa.
- 5—Intestinal Symptoms due to Achylia Gastrica. Alois B. Graham, Indianapolis, Ind.
- 6—Non-Specific Ulceration of the Rectum and Anus, with Report of a Case of Anal Herpes Zoster. Lewis H. Adler, Jr., Philadelphia, Pa.
- 7—Malignant Transformation of Benign Growths. Frank C. Yeomans, New York City, N. Y.
- 8—Acute Angulation and Flexure of Sigmoid as a Causative Factor in Epilepsy; Report of nine new Cases with four Recoveries. Wm. H. Axtell, Bellingham, Wash.
- 9—The Vaccine Treatment of Pruritus Ani. W. H. Kiger, Los Angeles, Cal.
- 10—Report of Experience with the Vaccine Treatment of Pruritus Ani. Louis J. Hirschman, Detroit, Mich.
- 11—Posture as an Etiologic Factor in Splanchnoptosis. Rolla Camden, Parkersburg, W. Va.
- 12—Photography for Record and Teaching; Lantern Slide Demonstrations. Collier F. Martin, Philadelphia, Pa.
- 13—The Present Status of Operations for Carcinoma of the Rectum and Lower Third of the Sigmoid. Samuel T. Earle, Baltimore, Md.
- 14—Observations on Fissure of the Anus. Rollin H. Barnes, St. Louis, Mo.
- 15—The Treatment of Hemorrhoids by a New Method. E. H. Terrell, Richmond, Va.
- 16—The Relation of Colonic Disease to the Kinetic System. James A. MacMillan, Detroit, Mich.
- 17—The Consideration of Rectal and Colonic Disease in Life Insurance Examinations. Alfred J. Zoebel, San Francisco, Cal.

- 18—Spasmodic Stricture of the Rectum. Louis J. Krouse, Cincinnati, Ohio.
 - 19—Some Important Pathological Conditions found About the Rectal Outlet. Lantern Slide Demonstration. Granville S. Hanes, Louisville, Ky.
 - 20—The Relation of the Roentgenologist to the Proctologist. Walter I. Le Fevre, Cleveland, Ohio.
 - 21—Syphilis of the Rectum. G. Milton Linthicum, Baltimore, Md.
 - 22—Position for Sigmoidoscopic Work. Donly C. Hawley, Burlington, Vt.
 - 23—Sixth Report on the Treatment of Pruritus Ani by Autogenous Vaccines. Dwight H. Murray, Syracuse, N. Y.
 - 24—Gangrenous Hemorrhoids; Reports of Cases. John L. Jelks, Memphis, Tenn.
-

TYPHOID FEVER REDUCED IN RURAL COMMUNITIES.

Reduction in typhoid fever and improvement in sanitary conditions have followed the intensive investigations of rural communities carried on by the United States Public Health Service in co-operation with local and State health officers, according to the annual report of the Surgeon General of that service. During the past fiscal year 16,369 rural homes in eight different states were visited and many of them revisited. In each of these homes information was obtained as to the prevalence of disease and insanitary conditions and a complete sanitary survey of the premises conducted. This was followed by reinspections to determine if remedial measures had been instituted. In but a relatively small percentage of the cases did the persons concerned, after having their attention drawn to the danger of a particular unhygienic condition, fail to inaugurate corrective measures. Stimulus was given to work by means of public lectures, the formation of active sanitary organizations, and the enlisting of all public-spirited citizens in the campaigns

for reform. Public buildings were also inspected and local authorities given expert advice in solving such sanitary problems as the disposal of excreta, the prevention of soil pollution, and the maintenance of pure water supplies.

The surveys made during the year 1914 had shown that in rural communities less than 1 per cent of the homes had sanitary toilets, and that more than 50 per cent of the people were using water from polluted sources. This condition, according to the Public Health Service, made the rural sanitation question loom large among the matters vitally affecting the welfare of the nation. Following these studies, and as a result of the interest aroused, the typhoid fever rate, an excellent indicator of the sanitary status of a community, has in some places frequently been cut to one-quarter of its previous figure. In Berkeley County, West Va., the cases of typhoid fever were reduced from 429 to 40 in one year. In Orange County, North Carolina, the rural sanitation campaign resulted in a reduction of the cases from 59 to 17.

The tangible results of operations in rural sanitation indicate that marked advancement in maintaining hygienic and satisfactory surroundings in country districts is possible by the application of the common principles of preventive medicine. Insanitary conditions exist largely because they are not known to be such. Actual demonstrations of their harmfulness, together with definite recommendations for their correction, remain one of the most gratifying and successful methods for instituting reforms and has been, in the experience of the Public Health Service, invariably accompanied by definite and measurable results.

EXAMINATION OF CANDIDATES FOR ASSISTANT SURGEON.

Treasury Department.
United States Public Health Service.

Washington, April 1, 1916.

Boards will be convened at the Bureau of Public Health Service, 3 "B" Street, S. E., Washington, D. C., and at a

number of the Marine hospitals of the Service, on Wednesday, May 31, 1916, at 10 o'clock a. m., for the purpose of examining for admission to the grade of Assistant Surgeon in the Public Health Service.

The candidate must be between 23 and 32 years of age, a graduate of a reputable medical college, and must furnish testimonials from two responsible persons as to his professional and moral character, together with a recent photograph of himself. Credit will be given in the examination for service in hospitals for the insane, experience in the detection of mental disease, and in any other particular line of professional work. Candidates must have had one year's hospital experience or two years' professional work.

Candidates must be not less than 5 feet, 4 inches, nor more than 6 feet, 2 inches, in height, with relatively corresponding weights.

The following is the order of examination: 1, Physical; 2, Oral; 3, Written; 4, Clinical.

Candidates are required to certify that they believe themselves free from any ailment which would disqualify them for service in any climate.

Examinations are chiefly in writing, and begin with a short autobiography of the candidate. The remainder of the written exercise covers the various branches of medicine, surgery, and hygiene.

The oral examination includes subjects of preliminary education, history, literature, and natural sciences.

The clinical examination is conducted at a hospital.

The examination usually covers a period of about ten days.

Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order. They will receive early appointments.

After four years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon. Passed Assistant Surgeons, after 12 years' service are entitled to examination for promotion to the grade of Surgeon.

Assistant surgeons receive \$2,000, passed assistant surgeons \$2,400, surgeons \$3,000, senior surgeons \$3,500, and assistant surgeon-generals \$4,000 a year. When quarters are not provided, commutation at the rate of \$30, \$40, and \$50 a month, according to the grade, is allowed.

All grades receive longevity pay, 10 per cent in addition to the regular salary for every five years up to 40 per cent after twenty years' service.

The tenure of office is permanent. Officers traveling under orders are allowed actual expenses.

For invitation to appear before the board of examiners, address "Surgeon-General, Public Health Service, Washington, D. C."

DO YOU KNOW THAT

Sags in roof-gutters may act as mosquito breeding places?

America's most valuable crop is babies?

The public cigar-cutter is a health menace?

The United States Public Health Service maintains a loan library of stereopticon slides?

The typhoid rate measures accurately community intelligence?

Whooping cough annually kills over 10,000 Americans?

Bad housing produces bad health?

Rocky Mountain spotted fever is spread by a wood-tick?

THE SAMUEL D. GROSS \$1,500 PRIZE, PHILADELPHIA
ACADEMY OF SURGERY.

(Essays will be received in competition for the prize until January 1, 1920.)

The conditions annexed by the testator are that the prize "shall be awarded every five years to the writer of the best original essay, not exceeding one hundred and fifty printed pages, octavo, in length, illustrative of some subject in Surgical Pathology or Surgical Practice, founded upon original

investigations, the candidates for the prize to be American citizens."

It is expressly stipulated that the competitor who receives the prize shall publish his essay in book form, and that he shall deposit one copy of the work in the Samuel D. Gross Library of the Philadelphia Academy of Surgery, and that on the title page, it shall be stated that the essay was awarded the Samuel D. Gross Prize of the Philadelphia Academy of Surgery.

The essays, which must be written by a single author in the English language, should be sent to the "Trustees of the Samuel D. Gross Prize of the Philadelphia Academy of Surgery, care of the College of Physicians, 19 S. 22d St., Philadelphia," on or before January 1, 1920.

Each essay must be typewritten, distinguished by a motto, and accompanied by a sealed envelope bearing the same motto, containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay.

The committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year.

The committee reserves the right to make no award if the essays submitted are not considered worthy of the prize.

WILLIAM J. TAYLOR, M.D.,

JOHN H. JOPSON, M.D.,

EDWARD B. HODGE, M.D.,

Philadelphia, March 1, 1916.

Trustees.

PELLAGRA PREVENTION—SPRING DIET DETERMINES
SUMMER SYMPTOMS.

A faulty or restricted diet at this season of the year is the chief factor in the production of pellagra. Measures to prevent the development of the disease should be instituted during the early spring months, according to a circular of information issued today by the United States Public Health

Service. While the manifestations of pellagra are in most cases not in evidence until June or July, the condition invariably dates from a faulty diet of earlier months. Therefore, if due precautions are exercised by individuals at the present time the havoc wrought by this scourge may be greatly lessened, if not entirely eliminated.

DANGER SIGNALS.

The report further calls attention to certain danger signals which should be recognized by those who reside in pellagrous districts or those who have had previous attacks of the disease. Among such warning symptoms are extreme nervousness or change in the mental characteristics of the individual. Weakness or debility, a disinclination to undertake the ordinary daily tasks, and unexplained digestive symptoms may all be premonitory signs. These symptoms do not, of course, necessarily mean the development of pellagra, but taken in connection with the history of a one-sided, monotonous, diet, they serve as a definite warning of the possibilities of its onset.

SPRING DIET.

The diet recommended by the health service for the prevention of pellagra will not produce results if followed for a week or ten days only, but if continuously and consistently used, under circumstances similar to its administration in the various institutions where the experimental tests have been performed, it will protect the individual against the development of the disease. Necessarily, a rigid unvaried diet is wholly undesirable and the menu recommended is only to indicate in a general way the character of the food to be prescribed. Frequently the element of poverty, inaccessibility to market supplies, or even personal idiosyncrasy, may require some modification of the diet table, so that strict adherence to its components may not in all respects be practicable. The object of the diet as submitted is to minimize the consumption of the carbo-hydrate (starchy and sweet) foods and to increase the amount of fresh animal protein and of fresh legumes (peas and beans).

The breakfast, for example, should consist of oatmeal and cream, without sugar, with either ham or breakfast bacon and two eggs. Not more than two thin slices of whole wheat bread should be taken, preferably untoasted. Hot bread or biscuits are inadvisable. A glass of fresh milk is to accompany the breakfast and either oranges or grape fruit may be the initial course. The dinner should consist of either pea or bean soup, prepared from dried peas or beans, with a meat stock. The meat may be beef, pork, ham, chicken, veal, or mutton, prepared in whatever manner is the most appetizing, preference being given to roasting or broiling rather than frying. Hamburger steak, meat hash, or fish may be substituted to afford variety. Care should be exercised that the meats are not overdone. Of vegetables, Irish potatoes, boiled in the jacket or baked, cabbage, turnip or mustard greens, collards and lettuce, are to be recommended. For dessert, stewed, fresh or dried fruit will prove sufficient. The dinner should be accompanied by not more than two thin slices of whole wheat bread and a glass of buttermilk. The supper should consist of pork and beans, or baked beans properly seasoned, the usual amount of bread and a glass of buttermilk. If preferred, eggs, scrambled or otherwise prepared, may be substituted for the more substantial ingredient of the meal.

DIET CHEAP AND AMPLE.

A diet such as the above is not prohibitive as to cost, at least to but few of the residents of the country, affords a sufficient number of heat units, if taken in reasonable quantity, and will effectually prevent the development of a disease which alone caused 8,000 deaths in the United States during the past year.

Seventy-six out of eighty-seven cases of typhoid fever which occurred in a recent outbreak have been traced by the United States Public Health Service to infected milk. Had the first cases been reported to a trained health officer the outbreak could have been stamped out promptly. When will we learn that disease prevention is sure and cheap?

Reviews and Book Notices

The Practical Medicine Series, Comprising Ten Volumes on the Year's Progress in Medicine and Surgery, Under the General Editorial Charge of Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in the Northwestern University Medical School. Vol. 1. General Medicine. Edited by Frank Billings, M.S., M.D., Head of the Medical Department and Dean of the Faculty of Rush Medical College. Series 1916. Chicago. The Year Book Publishers, 327 S. La Salle St.

The attention of our readers is called to this exceedingly useful publication consisting of a series of ten volumes for the year issued at monthly intervals on medicine and surgery. Each volume is complete on the subject of which it treats, so that the physician can buy only the parts they desire. This volume is on general medicine and has been prepared by the well known Chicago physician, Dr. Frank Billings. The entire subject is presented in astonishingly small volume and is complete as giving the reader a succinct presentation of every medical subject, all of which is brought fully up-to-date, presenting the latest changes and advances in the science and practice of medicine. As a reference book it is unexcelled, as it gives a quick and accurate picture of diseases, their recognition, etiology, pathology, and treatment. This one volume is worth the price of the entire set, and the other numbers to be issued promise to be equally as good.

Publisher's Department

THE REMEDY OF CHOICE IN CARDIAC AFFECTIONS.

It is interesting to note the growing interest medical men are taking in Cactina Pillets as a safe and dependable cardiac tonic. This is not surprising; indeed the only surprising feature is that the efficiency of this remedy has not been more generally realized. Hardly any one drug, with the possible exception of digitalis, has a broader field of activity, and there are many competent observers who place it first among cardiac remedies. Experience has shown that the most conspicuous influence of Cactina upon the heart is its effect on the local nutrition and consequent increase of the muscular-motor energy. Certainly it is the heart tonic par excellence, since it increases heart action and restores nerve function with a promptness that is rarely observed with any other remedy.

Made from a dependable preparation of Mexican *Cereus Grandiflorus*, Cactina Pillets are especially effective in functional disorders of the heart associated with feeble, irregular pulse, more or less dyspnea and a sense of chest oppression. In such cases the effect of Cactina Pillets is exceedingly gratifying, the heart being promptly steadied and strengthened, and dyspnea markedly relieved. Tachycardia and palpitation are quickly controlled, and the precordial sensations which cause so much apprehension are soon dispelled.

In accomplishing the foregoing, the physician does not have to apprehend toxic or untoward effects, for Cactina Pillets are not only non-cumulative but totally devoid of all unpleasant or disagreeable action. It is hardly to be wondered at, therefore, that careful, painstaking physicians are not only using Catina Pillets more extensively than ever, but are

gradually coming to look upon this preparation of cactus as the remedy of choice in functional affections of the heart.

Chemical Food is a mixture of phosphoric acid and phosphates, the value of which physicians seem to have lost sight of to some extent in the past few years. The Robinson-Pettet Co., incorporated, to whose advertisement in this issue we refer our readers, have placed upon the market a much improved form of this compound, *Robinson's Phosphoric Elixir*. Its superiority consists in its uniform composition and high degree of palatability.

Most doctors realize that as a symptom, pain has as a rule considerable diagnostic significance. Sometimes at least, if not often, the doctor is apt to overlook one fact, viz., pain to the patient is a condition not a symptom—he cares less for what it means than to get relief from it.

Hence the doctor is sometimes caught upon one horn of a double dilemma. To relieve pain by ordinary means—i. e., hypodermatic injection or narcotic, given per os, is to satisfy the patient but mask or alter the meaning of certain symptoms.

If the patient is left to suffer while the case is studied, the diagnosis is favored, but patient and friends resent what seems to them to be neglect. The use of opium or similar drugs to relieve pain is always fraught with danger—it's almost as bad as trying to cut off a dog's tail behind his ears! Nature has provided a means for pain relief or analgesia that deserves more careful and general use. In the arrangement of the sympathetic nervous system, the spinal distributing and reflecting centers, lies the explanation of the good effect of counter-irritation and analgesia produced through the skin by local and external application.

And upon such natural physiological rules and working plans is based the action of the Anodyne "First-Aid," viz., K-Y Analgesic.

Being greaseless and water-soluble, K-Y Analgesic when applied to the skin, absorbs rapidly, penetrates deeply, relieves promptly and is more or less prolonged in action and effect. The analgesic agents contained in it, camphor, menthol, and methyl salicylate are active but non-irritant or toxic, so that K-Y Analgesic can be applied as often as necessary and in any amount.

It does not stain the skin or soil clothing.

For the relief of headache, neuralgia, rheumatic pains, stiff and painful joints, lumbago, sprains, etc., K-Y Analgesic will be found to deserve a place in the doctor's mind—and in his bag, or on the shelf in his office.

Friction physiologically considered is a thing to be avoided. Its proper antidote is lubrication. The correct form of lubrication calls for slipperiness which is not supplied by grease or oil. Furthermore, grease or oil is unpleasant to use and it leaves behind stains or soiled places on the patient's linen, etc.

Instruments of penetration—such as the sound, catheter, speculum, scope or the examining finger, must be lubricated and so perfectly lubricated as to slip easily. To pass such an instrument deftly, quickly, with a minimum of pain or discomfort to the patient, requires perfect lubrication, which in turn enhances the manual dexterity and deftness of the operator. Patients are growing to be increasingly critical. They note their physician's attention to the "little things" and judge accordingly. Hence anything that will add to his skill or deftness must appeal to the doctor and for that reason he must be interested in K-Y Lubricating Jelly—Friction's Antidote.

This preparation is slippery but not sticky. It is greaseless. It is water-soluble. It is transparent. It is non-irritating. It is convenient to use and economical.

Properties which will recommend it to the discriminating doctor who has his patient's best interests as well as his own

at heart. K-Y Lubricating Jelly is also a valuable emollient and protective agent, in burns, scalds, bed sores, chafes, dermatitis, urticaria, hives, etc.

It relieves pruritus in the majority of instances and is exceedingly useful as a soothing and protecting application to the skin of children suffering from scarlet fever, measles, chicken pox, etc.

K - Y Lubricating Jelly also keeps the surgeons hands smooth, prevents bichloride rash and "improves the feel."

NASHVILLE JOURNAL — OF — MEDICINE AND SURGERY

CHARLES S. BRIGGS, A.M., M.D., Editor.
W. T. BRIGGS, B.A., M.D., Associate Editor.

VOL. CX.

JUNE, 1916.

No. 6

Original Communications

HERNIAS OF THE URINARY BLADDER.

BY AIME PAUL HEINICK, M.D.,
Chicago, Ill.

Professor of Surgery, Chicago College of Medicine and Surgery,
Surgeon to Rhodes Avenue, Jefferson Park, and
Frances Willard Hospitals.

The permanent or temporary escape of a part or the whole of the urinary bladder, through any of the usual or unusual hernial orifices, is uncommon. Nevertheless, many cases have been published and a much larger number have been allowed to pass without record. In a long series of hernia operations, every surgeon is certain to meet with some instances of hernia of the bladder. The urinary bladder in part or in its entirety is present in 1 per cent of all hernias.

Though the term hernia implies the presence of a hernial opening, of a hernial sac, sac-contents, and sac-coverings, we know that in many hernias of the urinary bladder the sac is either incomplete or totally absent.

To designate the clinical entity under consideration we fail to find any other term more appropriate, more sanctioned by long usage than that of hernia of the urinary bladder.

Many operators have unknowingly punctured, incised, ligated or removed a herniated bladder process and then closed the hernial canal and operative wound in the usual way. Bladder protrusions have been excised by mistake for hernial sacs, or stitches used to close hernial canals have been passed too deeply and found at the necropsy to have caught the bladder.

This article is based on an analysis of all the vesical hernias reported with sufficient data in the English, French, and German languages from 1896 to 1914, inclusive (literature to which access can be had at the John Crerar Library, Chicago, Ill.), and also on some unpublished personal cases (in all 159 patients, representing 164 vesical hernias).

As vaginal bladder hernias fall more appropriately within the domain of the gynecologists, we decided not to include them in this contribution. All the hernias herein considered were external hernias, that is, their outermost overlying saccular covering was skin; each after reaching a certain stage of development, gave rise to a more or less visible and palpable, external swelling in the obturator, femoral, inguinal, or other region, depending upon the anatomical location of the hernia.

INCIDENTS AS TO AGE.

It was not possible, in most cases, to ascertain the age at which the hernia first appeared. We therefore tabulated the age of the patients at the time of operative relief. In three cases, the patient's age at time of operation is not or is indefinitely stated (a young man, a multipara). The other patients at time of operation were from:

18 months to 5 years.....	7 cases
6 years to 14 years.....	6 cases
16 years to 25 years.....	8 cases
26 years to 35 years.....	27 cases
36 years to 45 years.....	31 cases
46 years to 55 years.....	36 cases
56 years to 65 years.....	18 cases
66 years to 75 years.....	15 cases
76 years to 80 years.....	5 cases

Our personal clinical observation and a review of the literature justify the following conclusions as to age incidence of hernias of the urinary bladder:

a. They are extremely rare in infancy, childhood and adolescence. During the first year of life, not one patient, and previous to the sixteenth year, only thirteen patients are reported to have been operated for hernia of the urinary bladder.

b. They are most frequent after the fortieth year of life. Ninety-one patients out of one hundred and fifty-nine unselected consecutive herniated individuals were operated for the relief of this condition during the fifth and subsequent decades of life.

c. Hernia of the bladder is an infirmity occurring chiefly in advanced life.

INCIDENCE AS TO SEX.

Hernias of the urinary bladder, like all hernias of viscera common to both sexes, are found more frequently in males. The one hundred and sixty-four hernias herein studied and analyzed were distributed as follows: Masculine pseudohermaphrodite 1, females 62, males 96.

Case reports show that, in the female, these hernias occur in nulliparae, in primiparae and in multiparae. They first became manifest either before, during or after gestation, or between successive pregnancies.

In looking over the cases, we find that vesical hernias have occurred in:

1—para	5 times
2—para	3 times
3—para	2 times
4—para	1 time
6—para	1 time
8—para	2 times
9—para	1 time
14—para	1 time
Multipara	3 times

In the other female subjects, no definite statement is made as to pregnancy.

INCIDENCE AS TO SIDE INVOLVED.

Most hernias of the urinary bladder are unilateral. Out of one hundred and fifty-nine patients suffering from this infirmity, only five presented double vesical hernias. In thirty-seven females and fifty-one males, it was on the left side. We thus see that hernias of the urinary bladder show in both sexes a noticeable predilection for the right side.

In bilateral hernias, both hernias either appear simultaneously, as, as is more frequent, an interval of time, measured in weeks, months or years, elapse between the appearance of the first and second hernia.

Hernias of the urinary bladder appear at various anatomical sites. Indirect or oblique inguinal hernias escape from the abdomino-pelvic cavity, above Poupart's ligament, by way of the external inguinal fossa, and follow in their progress outward the course of the spermatic cord in the male, or of the round ligament in the female. They are complete or incomplete, according as the herniated viscus or viscera emerge or not beyond the external opening of the hernial canal. The complete are pudendal or scrotal. In the former, the hernial mass descends into a labium majus, in the latter, into a scrotal pouch.

Direct inguinal hernias escape from the abdominal cavity by emerging through either the middle or the internal inguinal fossa and first appear externally at the superficial abdominal ring. Direct inguinal hernias are always to the inner or medial side of the deep epigastric vessels, and, unlike the indirect, do not follow the entire course of the inguinal canal.

In our cases, we find twenty-seven patients with direct inguinal hernias and eighty-seven with indirect or oblique inguinal hernias. Of the twenty-seven patients with direct inguinal hernias, five were females. Direct hernias are very rare in the young. Thirteen of the eighty-seven patients with indirect or oblique inguinal hernias were females.

In our list of cases, there were forty-two femoral hernias, forty of which occurred in female patients and two in males.

What precedes shows that:

a. Inguinal vesical hernias are more common in men than in women.

b. Femoral vesical hernias are far more common in women than in men.

c. Femoral hernias of the urinary bladder are an exception to the general rule, which is that inguinal hernias are more frequent in women than femoral hernias. Forty female patients presented femoral vesical hernias and only seventeen presented inguinal vesical hernias.

d. Direct inguinal vesical hernias are of frequent occurrence. Out of one hundred and fourteen inguinal vesical hernias, twenty-seven were of the direct variety, that is, in twenty-seven cases the herniated bladder process was to the inner side of the deep epigastric artery.

Gladstone's case of left obturator extra-peritoneal bladder hernia is the only obturator vesical hernia reported in the period covered by this paper. It co-existed with a right obturator tubal hernia of the third variety and a right reducible femoral intestinal hernia.

Gerulamos' and Tedenat's cases were irreducible supra-pubic vesical hernias of the linea alba. In these two cases, both of which occurred in eight paras, the pedicle of the hernial swelling passed above the upper surface of the symphysis pubis, and had emerged from the abdominal cavity through a round orifice between the two recti muscles.

According to the relations which the bladder protrusion bears to the peritoneum, hernias of the urinary bladder are classified into the following three varieties:

a. Intra-peritoneal, in which there is a complete hernial sac.

b. Para-peritoneal, in which the herniated bladder-process is covered by peritoneum on one surface.

c. Extra-peritoneal, in which the herniated portion of the bladder is neither engaged in nor contiguous to a hernial sac.

In the intra-peritoneal variety, the herniated portion of the bladder has a complete peritoneal covering and is contained in a true hernial sac. In the para-peritoneal variety, the herniated

bladder-process lies to the inner side of the sac, and its serous covering enters in part into the formation of the hernial sac. Part of the herniated bladder-process has no peritoneal covering. The para-peritoneal form is not uncommonly a sliding hernia, and is frequently due to a continuous pull and traction exerted by the sac of an existing enterocele, epiplocele or enteroepiplocele upon the peritoneal covering of the urinary bladder. In the extra-peritoneal variety, the herniated bladder-process has no peritoneal covering. The prolapsed bladder is neither present in nor does it enter into the formation of a hernial sac. The extra-peritoneal bladder protrusion is in relation with the subcutaneous tissues and is always distinct from and to the inner side of the hernial sac, if one be present.

In the one hundred and sixty-four reported cases, the hernia is definitely stated to have been:

Intra-peritoneal in 4 cases (females, 1 case).

Para-peritoneal in 53 cases (females, 21 cases).

Extra-peritoneal in 58 cases (females, 22 cases).

In the cases not included in the above tabulation, the relation of the herniated bladder-process to the hernial sac, when one was present, is not precisely recorded.

CLINICAL TYPES.

Any hernia of the bladder, be it intra-peritoneal, para-peritoneal or extra-peritoneal, may be reducible, inflamed, obstructed, or strangulated.

If the contents of a hernial sac return spontaneously to or can be manipulated back into the abdominal cavity from which they have escaped, the hernia is said to be reducible. At first most vesical hernias are reducible; the larger number, sooner or later, become irreducible. Reduction of hernial contents, spontaneous or manual, may be temporary, may be permanent, and is effected with more or less difficulty (general anesthesia may be required). In our collected cases, there were forty-eight hernias, the contents of which could be completely reduced. Sixteen of these occurred in female subjects.

If the hernial sac-contents cannot be manipulated back into the abdominal cavity, the hernia is said to be irreducible, provided that the irreducibility *per se* does not cause any functional disturbance of the herniated organ or organs, and none or but slight interference with the blood supply thereof. The irreducibility may be recent or of long duration. Partial and complete irreducibility predispose to inflammation, obstruction, and strangulation. Irreducibility is either of sudden or gradual onset. We noted fifty-eight irreducible vesical hernias, twenty-one of which occurred in females.

If communication between the herniated and the non-herniated portion of the bladder be more or less interfered with, the urinary bladder being transformed, in some instances, into a bissac, the hernia is said to be obstructed.

If, in addition to irreducibility of the sac-contents, the blood supply of the herniated organ or organs is interfered with to such a degree that their vitality is endangered or lost, the hernia is said to be strangulated. Strangulation may follow a paroxysm of cough, heavy lifting, a fall, any strong muscular effort associated with great sudden increase of intra-abdominal pressure. There were twenty-two strangulated hernias, eleven of which occurred in females. In some cases, the hernia of the bladder exists alone and becomes strangulated. In some of these strangulated cases, the vesical hernia was associated with an enterocele, an epiplocele, or an entero-epiplocele, the bladder was not constricted and the herniated omentum or intestine or both were strangulated. In others, the bladder was strangulated and the herniated omentum, intestine, or both were not constricted. Bladder-wall offers more resistance to constriction than intestine. Strangulation of the bladder is especially grave if renal disease coexists.

ETIOLOGY.

The etiology of these hernias is largely the etiology of hernias in general. In the causation of this pathological lesion, the following factors are of importance:

- a. All conditions that tend to increase intra-abdominal pressure 1. Occupations necessitating repeated muscular efforts as-

sociated with increased intra-abdominal tension, as the lifting or pushing of heavy weights, etc. (over twenty cases in our series).

2. Physiological or pathological states which distend the abdominal cavity, stretching the abdominal parietes, and widening the orifices normally present in the muscular and aponeurotic layers of the abdominal wall (enteroptosis, obesity, abdominal tumors, ascites, pregnancy, etc.).

3. All diseases associated with frequently repeated increase of intra-abdominal pressure (long-standing lung affection, pulmonary emphysema, chronic bronchitis, habitual constipation, etc.).

b. All conditions which weaken the abdominal wall.

1. Acute or chronic diseases debilitating the organism, especially such as cause great emaciation.

2. Obesity weakens the abdominal wall and increases the intra-abdominal pressure.

3. Traumatism. Most often the traumatism does not cause the hernia, but only reveals its existence (abdominal operations). Pathologic adhesions of viscera or omentum to the anterior parietal peritoneal wall near a hernia opening may act as a predisposing cause.

4. Previous hernia operations.

5. Enteroceles, epiploceles and entero-epiploceles.

6. Feeble development or atrophy of the aponeurosis of the transversalis muscle and of the conjoined tendon. This factor is of great importance in direct inguinal hernia.

7. Unduly large hernia rings.

8. Excessive breadth of hernial canal.

9. Congenital defects present in abdominal wall.

10. Inherited or acquired weakness of abdominal wall.

11. Preëxisting hernial sacs of pre- and post-natal formation.

c. All conditions associated with prolonged over-distention, over-stretching, impaired contractibility, restricted mobility, etc., of the urinary bladder.

1. Congenital malformation of the bladder.

2. Diseases of the lower urinary organs, impairing the expulsive force of the bladder or abnormally hindering the outflow of

urine (vesical catarrh, prostatic hypertrophy, urethral stricture, phimosis, etc.).

3. Abnormal increase of the peri-vesical fatty connective tissue (lipome pré-vésical).

SYMPTOMATOLOGY.

Hernias of the urinary bladder are congenital or acquired, recent or recurrent, and of greater or shorter standing. They vary in shape, volume, rate of growth, and in amount of discomfort and disability entailed. Occasionally they occur at the site of a previous hernia operation.

Hernia of the bladder is usually an acquired condition. It occurs most commonly in late adult life and is, not infrequently, secondary to pelvic, vesical and urethral diseases. Twenty-seven patients presented direct inguinal hernias. Direct inguinal hernias are said to always be acquired hernias. Forty-two patients presented femoral hernias. All these femoral hernias, except one case, that of a five-year old female child, and reported by the author to be an acquired hernia, first became manifest in adult life. Congenital femoral hernias are pathological rarities. Femoral hernia is essentially a hernia of adult life. Congenital hernias appear at all periods of life. Even at the time of operation, one may be unable to differentiate between a sac of pre-natal and one of post-natal formation.

Size is variable. A few of the reported hernias simply pointed; the others ranged in size from that of a hazlenut to that of a man's head. In many, the hernial swelling is merely stated to have been large, voluminous.

The hernial swelling may be cylindrical, ovoid, elongated-ovoid; it may be grooved or bi-lobed, soft, elastic, and fluctuating or hard and non-elastic. The hernial swelling may be a large, tense, smooth tumor, may occupy the scrotum, may extend as far as the middle of the femur, may occupy an entire labium, thereby distorting the vaginal opening.

The volume of a hernia is liable to rapid and considerable changes, being influenced by clinical type of hernia, position of body, amount of urine present in bladder, etc. The hernial swelling gives a dull or tympanitic percussion note.

Pain is an inconstant symptom. Ten of the reported cases are said to have been painless.

Diverse urinary disturbance (subjective and objective) may be present. These disturbances may be occasional or constant. Patient, in order to urinate, may find it necessary to elevate or to compress the scrotum and its contents, or to both, elevate and compress the scrotal contents. These patients sometimes resort to unusual positions to empty their bladder-dorsal decubitus. In a few cases, on account of the narrowing or compression of the joining isthmus, considerable difficulty is experienced in emptying the scrotal or labial portion of the bladder into the pelvic portion.

Vesical tenesmus. Pressure upon hernial swelling gives desire to urinate.

Burning on urination.

Frequent, difficult, and painful micturition are noted in many cases.

Increase of swelling with accumulation of urine, decrease with voiding.

Two-step urination (miction à deux temps) associated with a simultaneous lessening of the hernial swelling.

The injection of fluid into the bladder causes an increase in size of the hernial swelling. A sound introduced into bladder may enter the herniated bladder-process. A cystoscope introduced into bladder may show the round contour of the normal bladder distorted into T-shape, may show the vesical opening of the herniated bladder-process, etc.

Vesical hernias may exist alone, may be one of two or more hernias, coexisting with a hernia of other organ or organs on the same or opposite side of the body. Other congenital or acquired anomalies may be present: phimosis, ectopia testis inguinalis, cryptorchism, vaginal cystocele, hydrocele, prolapsus uteri, hydrocele of hernial sac, etc.

PATHOLOGY.

In many cases, note is made of excessive breadth of hernial canal, of enlarged hernial rings. The spermatic cord may be to the outer side of the hernial swelling, may be spread out over the

hernial sac, may be behind sac, may be below and external to sac, may be spread out over bladder (anterior and outer surfaces).

To differentiate a hernial sac of pre-natal formation from one of post-natal formation is at times difficult, at times impossible.

Acquired hernial sacs, except in hernias "par glissement," are always entirely derived from the parietal peritoneum.

Sac may be thin or thick, congested and infiltrated, intimately adherent to the spermatic cord, and, not uncommonly, is capped by a thick mass of fatty tissue. An extra-peritoneal bladder hernia has no serous hernial sac.

There may be an unusual amount of fat in the hernial canal. In the extra- and para-peritoneal forms, the herniated bladder-process is frequently covered with fatty-tissue, the "lipome horniaire" of the French authors. This pre-vesical accumulation of fatty tissue is thought by many to be an important contributory etiological factor.

In the para-peritoneal hernias, the serous sac is, at one point, intimately adherent to the bladder-wall. In the para- and also in the extra-peritoneal types, if a sac be present, the bladder is always to its inner, to its medial side, and, at times, below. The bladder may be adherent to the hernial sac, may be adherent to the spermatic cord.

Amount of viscus present in hernial swelling may be small, may be large. In some cases, the hernial swelling consists solely of the herniated bladder-process and of the increased amount of fatty tissue overlying it; in other cases, fifteen in our series, the hernial swelling consists of a serous hernial sac and of the herniated bladder-process or bladder-diverticulum. In a large number of cases, the hernial swelling includes a herniated bladder-process and a distinct or contiguous serous hernial sac with or without sac-contents. The hernial sac-contents may be hernial fluid, a part of right ureter, omentum, small intestine, large intestine, and omentum, small and large intestine.

In the strangulated cases, we note such contents as the following: Hemorrhagic fluid and the bladder; bloody fluid, gut, and ovary; a loop of congested intestine and urinary bladder; con-

gested bluish appendix epiploica; reddish-brown fluid, bladder-diverticulum, and small intestine.

The wall of the herniated bladder-process may be normal, thinned, or thickened. The herniated bladder-process may present the appearance of an empty or of a thickened hernial sac. Its cavity communicates with the cavity of the non-herniated portion of the bladder by means of a wide or narrow channel. It may be the seat of tuberculous disease, of carcinomatous disease. Calculi may be present in the herniated, in the non-herniated, or in both portions of the bladder.

The spermatic cord is sometimes found spread out over the vesical hernia, at times is distinct from it, and often is in close relation with a coexisting enterocele, epiplocele or entero-epiplocele.

DIAGNOSIS AND DIFFERENTIAL DIAGNOSIS.

The existence of a hernia of the urinary bladder may be ignored, suspected or diagnosed before operation. The diagnosis may first be made at the time of operation, or not before one or more days after operation. Evidence of the bladder having been wounded may not be present until sometime after the patient has left the operating table. Eminent clinicians have failed, even in operated cases, to recognize the true state of affairs previous to the autopsy.

Before operation, the following symptoms are suggestive of vesical hernias:

1. Urinary disturbances: dysuria, two-stage urination, frequent urination, scalding urination.
2. A hernial swelling, pressure upon which causes a desire to urinate, and which increases in volume with urinary retention, and markedly diminishes in size with urination.
3. A hernial swelling, the size of which is increased by air- or water-distention of the urinary bladder.
4. A hernial swelling in which fluctuation is detected or in which a metallic sound can be introduced by way of the urethra.
5. A hernial swelling, in which, after easy reduction of most of the contents, there persists a small doughy mass representing the extruded part of the bladder.

During the course of a hernia operation, the following symptoms or signs are suggestive of vesical hernias: ,

1. An unusual amount of fat in the neighborhood of a hernial swelling.

2. Difficulty in finding or in isolating the true hernial sac from the tumor mass.

3. The trabeculated appearance of the bladder muscularis.

4. Large-sized external hernial opening and the fact that hernias of the bladder are usually nearer the median line than true hernial sacs.

5. The occurrence of a second hernial sac is so rare that it is a safe rule to regard as the urinary bladder, until proved otherwise, any structure resembling a second hernial sac.

6. The pedicle of a herniated bladder-process leads down behind the pubic bone into the true pelvis; the pedicle of a true hernial sac leads to the general peritoneal cavity.

Passage of sound into a cystocele, cystoscopic confirmation of its existence, escape of urine following wounding of bladder (thirty-one cases), all these are conclusive signs.

Keep in mind that vesical hernias are frequently associated with intestinal and omental hernias.

Injury of the bladder may not be noticed at the time of operation, and be diagnosed, for the first time, several hours after operation by:

- a. Voluntary voiding or withdrawal by catheter of blood-stained urine.

- b. Urine escaping from the hernial operative wound. This is usually preceded by the development and subsequent rupture or incision of a urinary phlegmon.

- c. Sepsis due to urinary extravasation.

- d. Peritonitis due to escape of urine into peritoneal cavity.

TREATMENT.

In discussing the treatment, we will limit ourselves to the consideration of femoral and inguinal hernias.

An operator not on his guard, may incise the bladder under the belief that he is opening a hernial sac. In operating upon recur-

rent hernias, guard against wounding the bladder. If isolation of the hernial sac from the inner lower portion of the ring be difficult, involvement of the bladder is to be suspected. Avoid this injury by securing a good exposure of the operative field. The more exact the stripping of the sac, quite up to the deep epigastric artery, the more likely will cryptocele, especially in its earlier stages, be discovered.

Vesical hernias can be produced by traction upon the sac, and efforts to place the ligature high up may, if one be careless, result in catching in its bite the bladder-wall.

The bladder was accidentally injured in sixty-eight of the cases under consideration. In thirty-one, urine escaped into the operative field at time of operation.

Should the bladder be incised or otherwise injured, carefully suture it and provide appropriate drainage. Immediate closure of the bladder wound is of primary importance. It is effected by two, in some cases, by three layers of interrupted or continuous sutures. Introduce your bladder sutures so as to include all the layers of the bladder wall, the mucosa excepted. Needless to say that only absorbable suture-material is to be employed. Even if the bladder be not opened, but merely injured, it is safer to fortify the weak spot by the introduction of a few catgut sutures.

The herniated urinary bladder-process may be:

- a. Injured in attempts to carefully and cautiously separate surrounding adhesions. Not only must one be careful as to sac-contents, but also as to continuous tissues.
- b. Torn accidentally in trying to separate it from the hernial sac. The herniated bladder-process is more liable to be injured if it be the seat of such changes as are incident in strangulation.
- c. Punctured or pricked in suturing walls of hernial canal, in closing hernial orifice.
- d. Incised or ligated and cut off, being mistaken for a hernial sac.

Resection of the herniated bladder-process is indicated only if it be very much attenuated, necrotic or the seat of other serious degenerative changes. Resection is to be followed by suture of the bladder-wound. If a calculus or calculi be present in the

bladder protrusion, incise the bladder-wall, remove the foreign body, and repair vesical wound secundum artem. As a routine procedure, resection of the bladder protrusion is not to be recommended. It was performed only in twelve of the reported cases.

If the bladder protrusion be apparently normal, free it from surrounding adhesions, if any be present, and then reduce it into the abdominal pelvic cavity. As a routine procedure, bladder repair, bladder resection, and bladder reduction are always to be supplemented by reflection of the abdominal wall. After isolation of the herniated bladder-process, supplemented by the repair of any injury which it may have sustained during the course of the operative procedure, we advise that the bladder be reduced into the abdominal cavity.

Vesical hernias have been successfully operated for radical cure without anesthesia, under local (cocaine, infiltration), spinal, and general surgical anesthesia; nitrous oxide gas and oxygen, chloroform and ether (the majority of cases).

For inguinal hernias, the Bassini operation, with or without transplantation of the cord, seems to be the operation most universally employed; it was employed forty-one times. Czerny's, Andrews's, Ferguson's, Halsted's, and Kocher's type of operation were each employed once. Numerous other methods were employed. Various types of operation were employed in the femoral hernias (Berger, Coley, Lotheissen's operations, etc.). Some operators closed the hernial sac by a ligature, others by a purse-string suture, others by suturing the edges. In eighteen cases, it is stated that the hernial canal was freed of fatty tissue.

In all the cases in which the herniated bladder-process was not injured, in practically all those cases in which it was injured and repaired or resected and sutured, the organ, after being freed from surrounding adhesions, was returned into the abdominal cavity. Bernhard, in one case, after suturing the bladder, fixed it to the lower angle of the abdominal wound.

Operators are not agreed as to the advisability of using a permanent catheter after bladder suture, nor as to the time during which this permanent catheter, if used, should be left in the bladder. Some leave it in one day, some two days, some three days,

some four days, some five days, some six days, some one week, some two weeks.

Drainage extending to the bladder wound is a prudent provision against leakage from the sutured bladder. Many operators prefer, after bladder suture, to leave the abdominal wound open at its lower angle, and to close it as soon as conditions warrant.

If the hernial swelling contains, in addition to a bladder-process a knuckle of gut, a piece of omentum or some other viscus, the indication is to first free and reduce the bladder-process, and then carefully isolate, reduce, or resect, if indicated, the other hernial contents. In the absence of contra-indications, all hernial sac-contents, sac-fluid excepted, are to be returned into the cavity from which they have escaped.

A deviation from this rule is indicated in cases:

a. In which herniated omentum has undergone such inflammatory, cystic or other changes, that, if returned into the abdominal cavity, it might act as a foreign body.

b. In which the herniated gut or omentum is gangrenous or of doubtful viability.

c. In which the hernial contents are in such a pathological state that their return to the abdominal cavity would jeopardize the patient's life.

The treatment of the sac-contents does not differ from that which obtains in hernial swellings in which no bladder-process is present; if those contents are injured by the surgeon, the injury calls for repair.

RESULTS.

Operations for the radical cure of vesical hernias have practically no mortality. What mortality occurs is due either to concomitant circumstances, extreme old age, great debility, shock, long-standing strangulation, and unrecognized bladder injuries.

One of these hernias was a dissecting-room discovery; this leaves one hundred and sixty-three hernias occurring in one hundred and fifty-eight subjects. There were twelve deaths; all the other patients recovered.

Operations for the radical cure of vesical hernias are rarely followed by disagreeable sequelae. In thirteen cases, a urinary fistula complicated convalescence. These urinary fistulas usually closed spontaneously. One can, if he so desires, close these fistulas under cocaine anesthesia.

A careful study of the cases in which death occurred shows that operations for the radical cure of vesical hernias have no mortality per se, if all bladder injuries be suitably repaired. In bladder hernias, recognized either previous to or at time of operation, before closure of the abdominal wound, recovery is rapid and uneventful.

EXTRACTS FROM AN ADDRESS DELIVERED APRIL
12, 1916, BEFORE THE ZOOLOGICAL DEPART-
MENT OF THE UNIVERSITY OF CHICAGO.

BY CASPER L. REDFIELD.

The first thing I wish to call to your attention is the distinction between the foot-pound and the cubic foot. The foot-pound is used to measure work, and when work is stored, it is called energy. The cubic foot is used to measure material substances, or the space in which bodies are contained. What I have to say relates to things measured by the foot-pound, or corresponding unit, and not the things measured by the cubic foot.

If a man is sick he does not hire his doctor by the cubic foot. He hires him for the foot-pounds of intelligence he has. Not that we are in the habit of measuring intelligence by the foot-pound, but what I wish to direct your attention to is the fact that intelligence belongs in that class of things measured by the foot-pound and not in that class of things measured by the cubic foot.

The verb *to acquire* means to obtain by effort, by the performance of work, and work is measured in foot-pounds. If a man goes into a gymnasium he acquires strength by the exercises he takes, and the amount he acquires is measured by the foot-pounds of work he does. He will acquire more strength (muscular energy) by doing a million foot-pounds of work than by doing a thousand foot-pounds. Acquirements are also measured by time. A man who exercises regularly will acquire more dynamic development in a month than in a week, more in a year than in a month, and so on.

If an offspring is to inherit an acquirement made by the parent, the parent must make the acquirement first and get the offspring afterwards, not get the offspring first and make the acquirement afterwards. Among animals which work regularly, the greatest acquirement exists in later life, hence, if acquirements are inherited, the better progeny should come from the older parents. On the other hand, if the better offspring do come from the older

parents, that fact would mean the inheritance of acquirements, and mean nothing else. The reason is that age of parents represents time, and time is a factor in the measurement of work performed, and not a factor in the measurement of anything else.

It is commonly said that Weismann knocked out the doctrine of inheritance and Lamarck's theory at the same time. Weismann did nothing of the kind, either directly or indirectly. He attacked Lamarck on the inheritance of mutilations, but if he had known anything whatever of the subject about which he pretended to give information he would have known that the assumed inheritance of mutilations had nothing to do with Lamarck's theory. He also would have known that Lamarck had distinctly stated that mutilations were not inherited.

We are told that Lamarck's theory is that the offspring inherit the effects of the action of the environment upon the parent. It is nothing of the kind. Lamarck took particular pains to caution his readers against putting such an interpretation upon anything he said.

Your textbooks tell you that Lamarck's theory is "a species forming theory." It is nothing of the kind. Lamarck says species are an artificial classification by man for convenience, but that they have no existence in nature and have nothing to do with his theory. Lamarck's theory is a theory of the evolution of structural types by the action of habits formed in the struggle for existence, the kind of struggle being determined by the environment. Thus, animals living in water will struggle in certain ways; animals living in trees will struggle in other ways; animals living in the ground will struggle in still other ways, and so on. (See Packard's Translations.)

I am telling you these things for the purpose of pointing out to you that the doctrine which denies the inheritance of acquirements is based on an amazing amount of misinformation. It is also based on a total lack of scientific investigation of the subject. Acquirements are obtained by work, and work is measured in foot-pounds or some units convertible into foot-pounds. No investigation of this subject can have scientific merit unless it makes

some attempt to measure acquirements quantitatively and compare such measurements with subsequently produced offspring.

A parent can not transmit what he does not have. If he can transmit no more than he inherited, how can there be an evolution of animal powers, either mental or physical? Perhaps you think that such an increase might come by mutation or advantageous variation. But stop a moment to think what that means. A child is born with something it did not inherit from its parents! That would mean that special creation had taken place somewhere in connection with the reproductive process.

But some persons say that there has been no evolution of mental power, and they point to the men of ancient Greece as being equal to anything which has since existed. I might dispute that claim, but there is a better answer. We are not descended from Aristotle, Plato, Socrates, et al. Our ancestors were savages two or three thousand years ago. The fact that there were great men in ancient Greece is not evidence that we are no improvement over the savages from whom we are descended.

But it is even said that we are not inherently superior to those savages, and that the apparent superiority comes from education and accumulated information sometimes designated as social heredity. But how about another three thousand years, ten thousand years, a hundred thousand years, and so on back? If you deny all evolution of mental and physical powers, then you return immediately to the Garden of Eden story with each kind of animal originally created equal to anything which has since existed. If you attempt to dodge the Garden of Eden story, then you admit that a parent may transmit more than he inherited. That "more" must be something acquired, or it must be some special creation associated with reproduction. Something from nothing is just as wonderful at one place as another. The issue is not dodged by removing special creation from the Garden of Eden to the germ and dividing it into small fractions so as to spread it over many generations.

If you wind up a spring you store work in it. You can get out as much work as you put in, and that work may be used to drive a clock, pump water, compress air, or do anyone of many things.

If used to pump water the energy (stored work) is taken out of the spring and stored in the water. It may then be taken out of the water and stored in some other place, and so on in endless succession. There are laws relating to energy, which laws govern it in all of its transformations. But the energy which went into that spring came out of your muscles, and you may be certain that those laws governed that energy while it was in your muscles and on its way to and from that place.

You may concede that fact, yet think that human intelligence stands on a different footing. A mathematical calculation performed by either the human intelligence or a calculating machine is the same thing, and things which are equal to the same thing are equal to each other. The energy employed to drive the calculating machine is measured in foot-pounds, and the difference between the energy going through the machine and that going through the brain is a difference in the efficiency of the apparatus and not a difference in the essence of the energy involved.

Energy is transformable into many forms, yet it is always the same energy, and is always measurable in foot-pounds of some units which may be transformed into foot-pounds. Heat, light, electricity, physical strength and human intelligence are different species of the genus energy. There are specific laws for each species and generic laws for the genus. What I am driving at is to point out to you that the evolution of physical strength and human intelligence is and must be in accordance with certain generic laws which are definite and precise things in science.

The first of these laws is to the effect that you can't get something out of nothing. If, in the process of evolution from monad to man, we get successive generations of animals having greater and greater physical and mental power, the energy involved must necessarily have a source. That source can only be some existing form of energy. One trouble with the biological teaching of the present day is that it assumes conditions which involve a contradiction of this fundamental law known to science as the Conservation of Energy.

The second law relates to the behaviour of energy and the only possible conditions under which it may be conveyed from its

source to an available condition in man or mechanics. This law says that energy left to itself always dissipates and can be raised to an available condition only by the performance of work. This means that if there has been an evolution of mental and physical powers at any time in the past, that evolution was necessarily the product of work performed. Unless you are prepared to denounce as unsound the fundamental laws of another science, this is a conclusion you must accept. The second law is known to science as the Dissipation of Energy, and a large amount of the scientific progress during the past half century is based on a recognition of the soundness of this law.

The eugenists are telling us that the superior part of the population is producing an average of about a child and a half to the family, while the inferior part is producing some six or eight children to the family. This is a partial truth which may be a new discovery to the eugenists, but it is not a new phenomenon in the history of man. The same thing existed fifty and a hundred years ago. Five hundred and a thousand years ago. It existed in ancient Greece, and there are indications that it existed in China at the time of Confucius.

The eugenists tell us that from the feeble-minded we get only feeble-minded, but if we are not all descended from feeble-minded ancestors, then evolution is false. Evolution tells us that we are descended from a common ancestor with the ape, and we can not assume that common ancestor to have been mentally superior to those members of our community which we now designate as feeble-minded. Go back only twenty generations (about 600 years), and each one of us has more than a million ancestors taken from the common stock. In a population of a million there are many feeble-minded persons. But, on the test of family size, we can find them much nearer. None of us can go back far in our pedigrees without coming to large families. Under the Binet test, our eugenists would condemn their own ancestors as unfit to reproduce, and they would find those "unfit" ancestors much nearer than most of us suppose.

There is and always has been improvement in power capabilities from generation to generation. The most clearly defined and

best recorded case is the American trotter which was developed from the three minute trotter to the two minute trotter in a hundred years. I have published full details of the process by which this improvement has been brought about, yet those who deny the inheritance of acquirements have deliberately shut their eyes to this definite and positive evidence, and have gone on repeating their unfounded statements.

But you need not take the evidence I have collected. You can see the same thing from the animals with which you deal. Acquirements are obtained by the performance of work. With that in mind it can be seen that the amount of work performed per generation before reproducing by the different kinds of animals is an accurate representation of their advancement in power capabilities. This is true for all kinds of animals but is most easily seen in the higher animals. Man is intellectually superior to other animals simply and solely because he is mentally active more hours a day for more years before reproducing than any other animal. Increase the amount of work per generation and the race will advance. Decrease it and the race will degenerate.

Selected Articles

TWO CASES OF ACUTE INTESTINAL OCCLUSION FOLLOWING PARTURITION.

BY JANE LINCOLN GREELY, M.D.,
Jamestown, N. Y.

If the enemy always attacked at the expected time and place, and in the regular formation of dress parade, war would be simpler but less interesting.

On Monday, August 24, 1908, Mrs. H., a healthy primipara of twenty-nine, was delivered at 3.20 in the morning, after a normal labor of twelve hours. The only history of sickness to be obtained later, after repeated questioning, was of post-tonsillar abscess several years previous. Pregnancy had been normal and observation had been frequent. The placenta was expressed half an hour after delivery, and one dose of ergot was given. A perineal laceration was repaired. The abdomen was noted to be slightly bulging on the left, , suggestive of overstrained muscles, and was perhaps slightly more tender than in the average case. During the second stage the abdominal muscles had seemed inefficient. Monday evening there was slight tympany and slightly more prominence on the left and some general abdominal pain. Tuesday morning I found that there had been no sleep because of colicky pain, and vomiting had occurred twice. T. 98, P. 64. Morphin gr. 1-6 with atropin was given hypodermically. The condition remained much the same through Tuesday. Turpentine stupes were applied and a turpentine enema brought flatus and a small amount of soft feces. Vomiting was at intervals of four or five hours, without much nausea, regurgitant in character, and of greenish fluid. The abdomen was fairly soft. The pain was readily relieved by morphin gr. 1-6 in the evening. The third day the condition was much the same. T. 99, P. 64. An enema

brought flatus and a little feces. A dose of calomel was given, followed later by castor oil, which later, fortunately, was vomited. Morphine gr. 1-8 controlled the pain. Tympany continued of mild degree. Patient spoke of feeling as if everything went just so far and then stopped. In the evening the record T. 100 2-5, P. 100. In consultation with a surgeon it was decided to move the patient at once to the hospital and operate early next morning for obstruction of the bowel. Dram doses of dilute spirits were given through the night and retained. A right median incision below the umbilicus brought a gush of thin, yellow fecal matter from the ileum found to be firmly adherent at this point to the abdominal wall. The bowel was repaired and freed from the apparently old adhesions extending nearly an inch toward the right where it was sharply angulated, causing obstruction but not serious interference with circulation. The patient made a good recovery and has since had two normal pregnancies with normal delivery. The abdomen has been a little more tender and tympanistic following delivery than is usual, but there have been no other exceptional symptoms.

Last November (1914), Mrs. A., a healthy primipara of twenty-three, with a history of appendectomy four years previous, was delivered in a hospital after a tedious labor of thirty-six hours. In order to prevent undue strain on the scar tissue forceps were used to shorten the second stage. A perineal laceration was repaired. The delivery was shortly after noon on Sunday. The patient ate a light supper with relish and slept well. At the morning call Monday she seemed in fine condition, having a little abdominal pain and tenderness over the region of the fundus and to the right. In the evening she was reported to have persistent recurring pains which I assumed without investigation to be uterine pains and ordered by telephone a mild anodyne and the usual dose of oil. An hour later I found her suffering severely with somewhat more tympany on the right, but no rigidity. There was general abdominal tenderness, but not of exquisite degree. She lay on her back with knees flexed, but could turn without great distress and lie for a time on the side. T. 98, P. 64. I gave her morphine gr. $\frac{1}{4}$ with atropin by hypodermic, and waited till she

should be relieved before I left, supposing that it would be a matter of twenty minutes or so. But for nearly six hours I worked over her before the pains would remit for even five minutes. They were wave-like in character, at intervals of a minute or two, and were described by her as "hurting" pains or "gas" pains, always a little worse at the right. In all, she had not quite $\frac{3}{4}$ gr. morphin, with 1-50 gr. atropin. An enema given in the knee-chest position returned only after the insertion of a rectal tube. No flatus was passed. From 3 o'clock there was occasional relief from pain and some sleep. There was no vomiting whatever. An occasional spoonful of water was retained, and the following day an ounce or two of clear tea at intervals. The pulse varied from 64 to 84. The morning record was T. 93 3-5, P. 84. A surgeon saw the patient in consultation at 8 o'clock. In the abdomen, to the right of and about the level of the umbilicus, there was an elongated resistance not to be clearly defined, suggestive of possibility of tumor or fecal mass. It was decided to try for a few hours high enemata. In all, four enemata were given with no result and no return of fluid without tube. No opiate was given through the day and pain was not severe. At 4 p. m. the record was T. 101, P. 112, pain returning. At 8 p. m. for the first time there was vomiting, a flaky, dark odorless fluid with traces of oil. It was decided to operate at once. An incision through the right rectus showed the cæcum enormously distended and greatly congested. It was caught over a band reaching to the abdominal wall on the right, and was twisted half way around on itself. Two areas were so unpromising in circulation that the bowel was incised for the escape of gas and the areas repaired and turned into the lumen. In spite of a long period under ether the patient did not vomit at all after return to her bed and required no stimulation nor medication of any kind during the early days of convalescence. The only drawback to an otherwise excellent recovery was an infection of the perineal repair. Considering the number of enemata given, besides rectal manipulations in tests of the patency of the bowel at the time of operation, this was hardly to be wondered at. The infant was put to

the breast after the second day and both thrive without disturbance.

In the first case I lacked courage to have the mother resume nursing after operation, and the child died a few months later largely as a result of poor nutrition.

Occlusion of the intestine (Bibliography chiefly Nothnägel) may be:

1. From within the lumen: Gallstones, fecal mass, foreign body, new growth.

2. From the folding of the intestine upon itself: Intussusception, kink, adhesion, volvulus.

3. From pressure from without: Bands, new growths or displaced organs, herniae either through the abdominal wall or internal.

4. From loss of tonicity: Post-operative or traumatic.

Acute occlusion gives as cardinal symptoms:

1. *Pain.*

2. *Abdominal distention or meteorism.*

3. *Constipation* (total).

4. *Vomiting.*

5. *Collapse.*

An additional sign in some cases is the presence of large amounts of indican in the urine.

Were these five symptoms always present, the diagnosis might be readily made, but any one or all may be lacking, or all may be present without obstruction.

1. *Pain*—Typically, it is sudden and intense, due to two causes—increased peristalsis, and interference with nerves and circulation in the part affected—hence it may vary greatly in degree. If the tract is comparatively empty, it is less. If the tract is comparatively empty, it is less. If peristalsis is not excited by food or cathartics, it is less. It may cease altogether when the bowel is practically paralyzed. The pain is commonly general or centers at the umbilical region, but it may be localized elsewhere. Tenderness always accompanies it, but not at all of the degree common in peritonitis. It also, is usually localized, at least to a suggestive degree. Pain, which commonly quickens the pulse, may

sometimes in these cases, slow the pulse from effect upon the pneumogastric nerve branches. The degree of shock and pain is dependent not so much upon peristalsis as upon the injury to nerve and blood supply. Thus, in the second case, it was much more severe.

2. *Abdominal Distention*—In general, inflation of the intestine arises not only from accumulation of gases from fermenting food and inability to expel these gases downward, but also, and perhaps chiefly, from the inability of the blood current in the wall of the intestine to absorb gas. Possibly, in some cases, CO₂ is also given off by the blood. Hence the degree of meteorism depends in part upon the degree of injury to the bowel. At first it is usually most marked just above the point of obstruction. The tension may be so great as a result of internal pressure of gas, combined with muscular pressure of the wall from increased peristalsis, that a hard tumorlike mass may be felt, as in the second case, varying to the touch from time to time in degree resistance and outline. In acute obstruction, there is not time for the hypertrophy of the muscle wall which occurs in gradual obstruction, and visible peristalsis is therefore not to be expected. The patient may, however, have the distinct feeling of peristaltic waves and rumbling of the upper tract with feeling of definite interference at a given point. The rigidity of the abdominal wall is not nearly so marked as in primary local or general peritonitis, although either of these may speedily be added.

3. *Constipation*—As a rule it is absolute for flatus and feces, yet there may be a passage at the onset of pain or with the first enema. In the first case, however, each of the three enemata brought flatus and a small amount of feces. In the light of the findings, it may be inferred that the obstruction was not complete at first and some peristalsis continued below the point. Volvulus, on the other hand, gave this symptom in the second case with absolute clearness. There was *no* effort to expel gas or feces. Intussusception would have given tenesmus with bloody mucus. Rarely there may be, even with total occlusion, a diarrhoea from excessive secretion of the mucosa below the point.

4. *Vomiting*—Pain, of itself, may cause initial vomiting. But the vomiting of obstruction, is, according to some observers, neither reflex nor due to retroperistalsis, but is the flowing back of liquid from accumulation against a barrier and is favored by the changing pressure of the abdominal wall. Now, if the canal is nearly empty, or if the obstruction is low down, vomiting may be long delayed. The vomitus may gradually acquire fecal odor and color, not because it comes from the lower tract, but because of chemical changes going on while the contents of the ileum are stagnant. If typical, the vomiting is regurgitant without much nausea. Fecal vomiting is not a symptom to wait for.

5. *Collapse*—In both cases above I was much impressed with the lack of constitutional indications of the gravity of the condition. Even the second, in spite of prolonged pain, did not show the drawn, gray countenance with moist forehead that my fancy would have pictured in reading. The pulse was a trifle slow, but good in volume and quality, until shortly before operation. Temperature was not affected till then. The patients were both of them responsive and fairly cheerful. Collapse is not a symptom to wait for.

The presumption was certainly in favor of the pelvis as a source of trouble. Against this one could only put the lochia, normal in character and amount; the softness of the lower abdomen; the only slight tenderness over the fundus and more elsewhere; and the character of the pulse. The normal temperature also looked otherwise. Peritonitis, either local or general, would be ruled out by these same signs, although exceptionally peritonitis may occur without fever or rigidity or extreme tenderness on pressure. In both cases peritonitis would have followed in twenty-four to forty-eight hours at the farthest and would have dominated the picture. Rupture or perforation would have been much more rapid in development of grave signs. A twisted pedicle would have given a more or less well-defined tumor mass somewhere. Internal hernia could only be ruled out by operation. Paralytic distention of bowel might have followed rough handling or very difficult delivery, but the distention would have been even and more pronounced.

TREATMENT.

Relief of Pain—It is the first consideration, not only for the comfort of the patient, but to prevent further damage from excessive muscular action. Morphine by hypodermic was the quickest way to secure this end and to prevent shock. To give morphine for the relief of a patient still felt to be in danger and watched, is not like giving it for the peace of mind of the doctor. Perhaps opium by mouth would have been better as advised by good authority.

One Enema—Possibly Two—The first empties the lower bowel for relief and for treatment, if needed. The second may serve as a diagnostic test, especially with a low obstruction as of the sigmoid.

No Food—Water in very small amounts is important. Gastric lavage may serve the double purpose of checking excessive vomiting and administering water.

No Cathartics—The wisdom of this detail of treatment is self-evident. And yet, I am not wholly sorry that the active peristalsis made enough more disturbance to convince the watcher that something radical must be done, and soon.

I may add in treatment, *no vigorous handling* of the abdomen. When the conditions are actually seen promptly, the sight is very convincing as to the wisdom of fairly gentle palpation.

REFLECTIONS.

In twenty-four hours longer these would have been cases of peritonitis with the burden of proof resting on one who claimed any other than pelvic origin. Are there other cases like them? Was the great change in intra-abdominal pressure the immediate cause of the trouble?

Bowels that will not move must *not* be made to move; or otherwise put, severe abdominal pain is a contra-indication for cathartics.

First find out what is the trouble before giving telephone orders.

Do not assume because a patient is nervous that she has "nervous pains."

A surgeon is a handy thing to have in the house.

And, finally, if you *must* have a case of intestinal occlusion, put aside your natural scruples and choose a two-day parturient, whose intestinal tract is therefore nearly empty and whose system is at the top notch of reparative efficiency.—*New York State Journal of Medicine*.

Extracts from Home and Foreign Journals

SURGICAL

RAMMSTEDT'S OPERATION IN HYPERTROPHIC PYLORIC STENOSIS.

H. Lilienthal (N. Y. Med. Jour.) states that Rammstedt has reported two cases operated upon by his method with recovery. He makes a longitudinal incision through the indurated tissue down to the mucosa, but not through it. There is an immediate separation of the divided structures and the pylorus at once becomes patent. Without visceral suture or plastic of any kind, the abdomen is completely closed. The operation is short and easy. The wound of entrance through the abdominal wall need not be large. The handling of the viscera is minimal. The contrast to the delicate and difficult posterior gastroenterostomy, with its accompanying evisceration and handling of the parts, is striking, and, perhaps, most important of all, Rammstedt's operation preserves the normal relations of the gastro-intestinal tract. This preservation is obviously impossible in gastroenterostomy.—*The Medical Progress*.

MEDICAL

NEUROTHERAPY.

Calcium in Epilepsy—Dr. John Bryant (in Boston Medical and Surgical Journal, October 7, 1915), after discussing the metabolism of calcium, asserts that the diet is very apt to be deficient in calcium. Analyses of brain substance have demonstrated the presence in this tissue of less than the normal amount of calcium, in certain disorders marked by hyper-irritability of the nervous system. The osseous system of epileptics are thought to be deficient in calcium. Calcium has been used successfully in explosive conditions like tic and tetany. Then why not epilepsy?

Using the official syrup of calcium lactophosphate in doses of one or two teaspoonfuls three times a day, and in many cases, the writer reports it to be quite effective in the *petit mal* type, reducing nervous irritability and improving the general condition of the patients. But nearly all types of epilepsy have shown some benefit from the syrup, and Dr. Bryant is encouraged to continue his trial of this drug in all types of explosive neural manifestations—*Medical Council—Therapeutic Digest*.

OBSTETRICAL

HYDROPS TUBAE PROFLUENS.

Defining the condition of the fallopian tube in which the abdominal ostium is closed by inflammatory adhesions while the uterine opening is free, T. H. Lewellyn and F. B. Block, Philadelphia (Journal American Medical Association), April 1, 1906), report a case which they think may have been largely due to trauma. The condition, also known as intermittent hydrosalpinx, is only a variety of ordinary hydrosalpinx but apparently not a very common one. Only three cases of intermittent hydrosalpinx were observed by Norris in the records of the gynecologic department of the University of Pennsylvania in a total series of 925 inflammatory tubes, and since Norris' paper, the authors have found one other reported case. The operation performed consisted of a supravaginal hysterectomy, right salpingectomy and left oophorocystectomy. The left tube had been previously removed and the left ovary was transformed into a follicular cyst; the right appeared to be in good condition.—*The Medical Herald*.

Editorial

PUBLISHER'S NOTICE—The Journal is published in monthly numbers of 48 pages at \$1.00 a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money order, draft, or registered letter, should be addressed to the Business manager, C. S. Briggs, M. D. corner Summer and Union Streets, Nashville, Tenn.

All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

THE POISONS IN TOBACCO SMOKE.

Cigarette smoking is becoming more and more common; even young women are addicted to the habit, not only on the continent and in England, but also in the United States. Just how widespread the habit will become before there results the inevitable reaction is a hard question to answer, but certainly there is no evidence at the present, of it being checked.

The cigarette is singled out as the worst form in which to use tobacco, though many of its bitterest enemies can give no scientific reason why they oppose tobacco in that form while they are lenient towards the use of the pipe or cigar. Some states have passed laws prohibiting the sale of cigarettes, others merely prohibit the sale to minors, but so far as we know there are no such laws against the sale of cigars and pipes. The cigarette is thus singled out because boys usually commence to use tobacco in this form; because youthful smokers, as a class, are not so strong and robust physically as non-smokers of the same age; because statistics show that students who smoke do not progress as rapidly as abstainers; and finally, because cigarette fiends often acquire the love of strong drink. Surely these are good reasons, but are empiric rather than scientific.

Since the tobacco they contain is very mild, why are cigarettes so injurious? As a matter of fact they are perhaps less injurious than any other form of tobacco, provided they are smoked

in the same way. But cigarettes are seldom smoked without inhalation; and not only does inhalation increase the injurious action but it also leads to an abuse of the habit, since following the primary soothing effect there is a later depression which calls for another smoke. Thus develops the cigarette fiend. He is not so bad as the drink, morphine, or cocaine fiend, but a fiend nevertheless. Like the dope find,, he claims a desire to stop the habit, so oftentimes he changes to cigars or the pipe. But he gains nothing by the change, since he usually continues to inhale and smokes about as often. Used in this way the pipe or cigar is even more injurious than the cigarette since the tobacco is stronger and more poisonous.

It is relatively easy for the non-inhale to give up smoking, but he who inhales and gives up the habit, has a bitter struggle, and you will seldom see a fiend who has not gone through this battle and emerged—vanquished. Those who have struggled victoriously, either do not smoke at all or avoid inhalation as the dipsomaniac avoids the taste of liquor. Inhalation not only injures the health, but since it makes one a slave to habit, it weakens the will. Alcoholic stimulation relieves the depression following excessive smoking, so it is easy to conceive the cigarette habit as one of the roots of the liquor habit.

From a scientific standpoint the injurious effect of smoking, especially inhalation of the smoke, can be explained as follows: Tobacco smoke contains, besides water, carbon dioxide, carbon monoxide, nicotine, certain aldehydes, and ammonia compounds. Some of these products are strong poisons, and it is fortunate indeed that they are present in tobacco smoke in rather small quantities. That they are present, however, in sufficient amount to exert a strongly toxic effect, no one can deny who remembers his first smoke. Since beginners seldom inhale, the poisoning is largely due to absorption in the mouth, which at most presents but a few square inches of surface. The lungs, however, offer an absorption surface estimated at a hundred square yards! Considering this great difference of the absorption surfaces of the lungs and mouth we are forced to conclude that either the lung absorption of tobacco poisons is much less per

square inch than that of the mouth or that the system accommodates itself to tobacco in a wonderful manner.

The products of tobacco smoke which are especially injurious are carbon monoxide, nicotine and certain aldehydes. The most important aldehyde is furfural, akin to the fusel oil in whiskey. It is obtained especially from cigarettes. Nicotine, however, is obtained in larger amounts in cigar and pipe smoke. Carbon monoxide is a product of incomplete combustion and it, too, is found in larger amounts in pipe and cigar smoke, since combustion is always more complete in the cigarette.

Carbon monoxide combines with the hæmoglobin of the blood to form carbon-monoxide-hæmoglobin, which is a more stable product than hæmoglobin, and this means that less oxygen is absorbed from the respired air and also that less oxygen is given off to the tissues of the body. In other words the body cells suffer for want of oxygen and normal metabolism is retarded. This effect of the carbon monoxide may account for the "short wind" of cigarette fiends and certainly helps explain their rather poor physical development. Nicotine seems to effect especially the nervous tissues; so if cigarette fiends are mentally backward, it is probably due to the loss of the power of concentration dependent on an unstable nervous system.

We see from the above that there are scientific as well as empiric arguments against the use of tobacco, more especially when used before growth is complete and when inhaled. The increasing use of cigarettes by the old as well as the young, by women as well as by men, is weakening a well-founded prejudice against this form of tobacco. Laws prohibiting the sale of cigarettes are weakly enforced. If we would protect boys and youths from this evil, cigarette selling should not be prohibited, but the tax on every cigarette, whether made with paper or tobacco cover, should be so large as to raise the price of the cigarette beyond the reach of most boys and young men.

W. T. B.

A CARD OF THANKS.

During the past few years I have passed through the greatest sorrow of my life. All the trouble, expense, shame, scandal, and

disgrace an insanely jealous wife can bring upon a doctor whose patients were 80 per cent women has been mine. Through all this none have stood by me, cheered and encouraged me when life seemed worth only the taking, as the medical profession. It was not ostentatious. Often only a stop, a firm shake of the hand. Oftenest no reference to my great trouble, but it was not that hurried hello, good-bye of the every day. Some spoke beautiful words of encouragement, others offered me funds or the privilege of sleeping in their back offices. My funds were all tied up by a double injunction for ten months. Another thing that touched me was that several nurses offered to do my mending for me, and druggists, too, offered to do me favors. Truly this is a noble profession to which we belong. I may also add that though notices of my trouble were studiously sent to all the medical journals in the United States, not one of them published me. May I add a word to the noble character of the patient whose honor and good name, almost her life, were sacrificed to the insatiable thirst for revenge and money. She stood up before an insanely jealous wife, a murderously mad husband, and a scandal hungry public, and said, "I am to blame." Truly a greater love hath no man than this.

E. S. McKee, M.D.,

Cincinnati, Ohio, March 3, 1916.

PATIENT UNDER LEGAL DUTY TO MINIMIZE HIS
DAMAGES.

An interesting case of malpractice came up recently before the Washington State Supreme Court. A log in a lumber camp rolled over the foot of a workman, dislocating one of the cuneiform bones and otherwise injuring him. After a rather protracted time in the hospital he left, but still suffering from pain. When he walked the weight of the body rested on the projecting end of the bone, causing much pain. It was alleged that the surgeon was guilty of malpractice, in that he neglected to reset the bone within the first three weeks. The jury gave verdict for the plaintiff, but the trial court entered judgment for the defendant, not-

withstanding the jury. On appeal it resolved itself into whether the surgeon should have set the bone, or if not, in time should he have operated to reset the bone. Expert medical witnesses differed widely as to this question. The Supreme Court held that as doctors of equal learning and experience disagreed as to the methods of treatment it could not hold the surgeon guilty of malpractice. There was another question, however. The court claimed that when the patient left the hospital and found he could walk only with great pain it was the duty of this surgeon to operate on this foot to relieve the pain. Hence the court directed a judgment for the plaintiff for \$200—a reasonable sum for the operation. As the defendant was not the cause of the injury he was not held liable for the pain and suffering pending an operation. The court claimed that it was the patient's duty, if he conceived that he had been maltreated, to have an operation performed and bring suit for the reasonable cost thereof.

E. S. M.

LITTLE DAMAGE TO THE ABBOTT LABORATORIES.

A small fire with explosion of gases occurred, April 21st, on the top floor of one of the buildings of The Abbott Laboratories. Newspaper reports of the extent and character of this accident were grossly exaggerated. The damage was very small, consisting mainly of broken window panes and cracking of temporary partitions. The plant and machinery were injured but slightly, and the entire force went to work the next morning as usual. The Abbott Laboratories have issued a statement positively denying the newspaper reports that this firm is or has been engaged in the manufacture of ammunition or explosives.

ASSISTANT EPIDEMIOLOGIST (MALE), \$2,000-\$2,500.

June 6, 1916.

The United States Civil Service Commission announces an open competitive examination for assistant epidemiologist, for men only. From the register of eligibles resulting from this examina-

tion certification will be made to fill vacancies in this position in the Public Health Service, at salaries ranging from \$2,000 to \$2,500 per annum, and vacancies as they may occur in positions requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

The duties of this position will be to make epidemiologic and sanitary surveys to determine the prevalence and causation of disease, to conduct laboratory studies in relation thereto, and to recommend measures to prevent and control outbreaks of disease.

It is desired to secure persons thoroughly competent in the various branches of sanitary bacteriology, and especially in isolating the typhoid bacillus from infected persons and materials.

Competitors will not be assembled for examination, but will be rated on the following subjects, which will have the relative weights indicated:

<i>Subjects</i>	<i>Weights</i>
1. General education and medical training-----	25
2. Laboratory experience -----	25
3. Experience in epidemiological work-----	40
4. Publications or thesis-----	10
Total-----	100

Graduation from a medical school or college of recognized standing, or graduation in sanitary engineering from a college or university of recognized standing; and at least three years' experience in epidemiological work under Federal, State, or local authorities, and experience in laboratory technique, especially in regard to typhoid fever, are prerequisites for consideration for this position.

If a thesis is submitted under Subject 4 it must be on some sanitary subject upon which the candidate has done special work.

Statements as to education and experience are accepted subject to verification.

Applicants must have reached their twenty-third but not their fortieth birthday on the date of the examination.

This examination is open to all men who are citizens of the United States and who meet the requirements.

Persons who meet the requirements and desire this examination should at once apply for Form 304, and special form, stating the title of the examination desired, to the United States Civil Service Commission, Washington, D. C.; the Secretary of the United States Civil Service Board, Post Office, Boston, Mass.; Philadelphia, Pa., Atlanta, Ga., Cincinnati, Ohio, Chicago, Ill., St. Paul, Minn., Seattle, Wash., San Francisco, Cal., Customhouse, New York, N. Y., New Orleans, La., Honolulu, Hawaii; Old Customhouse, St. Louis, Mo.; Administration Building, Balboa Heights, Canal Zone; or to the Chairman of the Porto Rican Civil Service Commission, San Juan, P. R. Applications should be properly executed, excluding the medical and county officer's certificates, and must be filed with the Commission at Washington, with the material required, prior to the hour of closing business on June 6, 1916.

Issued May 1, 1916.

HEALTH NEWS.

Poverty and tuberculosis—tuberculosis and poverty! These are the essential facts which force themselves to the attention of every investigator who faces the problem of that disease. The tenement house district of Cincinnati yields a tuberculosis morbidity just three times as great as the areas where better housing prevails. In 197 families in which tuberculosis existed the average monthly income for a family of four was approximately \$57. After paying the pro rata share for food and rent, a balance of \$5.13 remained for each individual to meet all other expenses. Such a low subsistence works like black magic in the spread of tuberculosis. Moreover, and this is a point over which the public should ponder, the home of the average wage earner was found to be far less sanitary than the average factory and workshop. In regard to all the factors which make for healthful living, ventilation, sufficient light, proper temperature, and freedom from

overcrowding, the score was in favor of the factory in nearly every instance.

The city of Cinicnnati realized that her tuberculosis death rate was 50 per cent above the average and that it had failed to manifest a tendency to decline. She felt no qualms in making this admission. Rather, she determined that she would learn why, with an efficient health department and favorable climatic influences, she was suffering from twice the mortality from that disease as her neighbor, Pittsburg. Accordingly the United States Public Health Service was requested to make a thorough study of the situation and submit a report. To show that something more than mere academic interest obtained, 19,932 workers in 154 factories of the city voluntarily submitted to a physical examination.

The conclusions reached, point directly to the close connection between poverty and tuberculosis. The great factor underlying the entire problem was seemingly that of economic conditions. One-sixth of all tuberculosis cases came from cheap lodging houses. Alcoholism was a prominent cause, and often accelerated the course of the disease. Occupational hazards and bad working conditions were apparently responsible for about 20 per cent of the cases, but in the majority of instances these hazards were not necessarily inherent in the occupation. Previous tuberculosis in the family occurred in practically a third of all the cases investigated. Dissipation, overcrowding, bad housing, and innate lack of personal responsibility, were also listed as causes.

An interesting feature of the report, and one which has not previously been dwelt upon in studies of this character, relates to the effect of immigration and the rate of growth of the population of a city upon the tuberculous death rate. It is shown that cities with a population composed largely of racial stock having a limited resistance to tuberculosis are subject to a high mortality rate from that disease, while centers having a slow rate of population increase are likewise subject to a high tuberculosis rate. The evidence is submitted in a comparative table covering sixteen American cities. Almost without exception those with a high percentage of Irish, Scandinavian, and German stock, and those in which the negro population is relatively large, have a corre-

spondingly high mortality, while those where the Italian and Jewish element is proportionately great have a low tuberculosis death rate. Similarly, such cities as Detroit and Cleveland, with high rates of population increase, show a low tuberculosis mortality, while Cincinnati and Baltimore with a relatively small population increase have a high tuberculosis rate. Doubtless the true explanation of this discrepancy is that advanced by the authors, namely, that where the population increase is rapid new buildings are erected to take the place of old insanitary structures and better structures and better housing conditions prevail.

Efficient muzzling of dogs will eradicate rabies?

The protection of the health of children is the first duty of the Nation?

Bad temper is somewhat merely a symptom of bad health?

Insanity costs every inhabitant in the United States \$1 per year?

The U. S. Public Health Service has proven that typhus is spread by lice?

Untreated pellagra ends in insanity?

In the lexicon of health there is no such word as "neutrality" against disease?

The death rate of persons under 45 is decreasing; of those over 45 it is increasing.

CLINICAL DIRECTOR (MALE), \$2,000. GOVERNMENT HOSPITAL
FOR THE INSANE.

June 27, 1916.

The United States Civil Service Commission announces an open competitive examination for clinical director, for men only. From the register of eligibles resulting from this examination certification will be made to fill a vacancy in this position in the Government Hospital for the Insane, Washington, D. C., at a salary of \$2,000 per annum, with maintenance in the hospital, and vacancies as they may occur in positions requiring similar qualifications.

unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

Competitors will not be assembled for examination, but will be rated on the following subjects, which will have the relative weights indicated:

<i>Subjects</i>	<i>Weights</i>
1. Education -----	40
2. Training and experience -----	60
Total -----	100

Applicants must be graduates of a medical school of recognized standing, and must have been in actual charge of a medical service in an institution for the care and treatment of the insane for at least five years, during the entire period of which time they must have received special training in psychiatry. They must have contributed to medical literature (a) on the general subject of insanity in some of its phases, or (b) by report of cases coming under their observation.

The appointee, in his capacity as clinical director, will have general administrative supervision of the medical work of the hospital together with supervision and care of the hydrotherapeutic departments, operating room, and training school for nurses; all transfers of patients from one service to another will be made through him; he will have charge of the clinical records and will see that they are properly kept, and be in a position to offer suggestions that recent medical literature may contain along the lines of clinical psychiatry.

Statements as to education, training, and experience, are accepted subject to verification.

Applicants must not have reached their thirty-fifth birthday on the date of examination.

This examination is open to all men who are citizens of the United States and who meet the requirements.

Persons who meet the requirements and desire this examination should at once apply for Form 1312, stating the title of the examination desired, to the United States Civil Service Commission, Washington, D. C.; the Secretary of the United States Civil Ser-

vice Board, Post Office, Boston Mass., Philadelphia, Pa., Atlanta, Ga., Cincinnati, Ohio, Chicago, Ill., St. Paul, Minn., Seattle, Wash., San Francisco, Cal.,; Customhouse, New York, N. Y., New Orleans, La., Honolulu Hawaii; Old Customhouse, St. Louis, Mo.; Administration Building, Balboa Heights, Canal Zone; or to the Chairman of the Porto Rican Civil Service Commission, San Juan, P. R. Applications should be properly executed, excluding the medical and county officer's certificates, and must be filed with the Commission at Washington prior to the hour of closing business on June 27, 1916.

Issued May 23, 1916.

Reviews and Book Notices

The Mortality from Cancer Throughout the World —By Frederick L. Hoffman, L.L.D., F.S.S., F.A.S.A., Statistician The Prudential Insurance Company of America; Chairman Committee on Statistics, American Society for the Control of Cancer; Member American Association for Cancer Research; Associate Fellow American Medical Association; Associate Member American Academy of Medicine, etc. Newark, N. J. The Prudential Press, 1915.

Our thanks are due the president of the Prudential Insurance Company, Forest F. Dryden, for a copy of this very valuable work. It represents the investigations of its author, Dr. Frederick L. Hoffman, the distinguished statistician, into the all-momentous question of the prevalence of cancer in this and other countries. When we consider the facts that the mortality from malignant diseases in the United States is 80,000 annually, and that cancer mortality is increasing approximately 2.5 per cent per annum we can readily appreciate any efforts made to reduce these frightful rates of mortality. This appalling increase in the face of the reduction of mortality rates in other diseases against which systematic campaigns have been instituted in recent years should awaken the interest not only of physicians but of the laity. The work is one representing the greatest industry and accuracy on the part of the author and his coworkers and is a marvel of condensed statistical information. The work has been prepared not only for the medical profession but for the people.

Historical Sketch of the Southwestern Kentucky Medical Association, with Constitution and By-laws and Code of Ethics of said Association; with a Biographical Sketch of the Ex-Presidents and a Roster of the Members.

Our thanks are due the historian of the association, Dr. R. T. Hocker, of Arlington, Ky., for this exceedingly well prepared history of one of the most flourishing medical societies in America. The history covers the meetings of the association from its organization in 1866 to the present time, giving short biographical sketches of the various presidents, a brief mention of important

papers read and addresses delivered, concluding with a copy of the constitution and by-laws and the code of ethics of the members. Much credit is due Dr. Hocker for the makeup of this interesting history and we have no doubt that it will prove of great value to the members of this association. A feature of the little volume is the excellent portraits given of the various presidents.

Publisher's Department

WHEN THE PHYSIOLOGIC PROCESSES OF THE BOWEL NEED STIMULATING.

In this day of extremes, the practitioner must not let the success obtained in certain cases of bowel stagnation, by the use of "intestinal lubrication" blind him to the fact that paraffin oil is essentially restricted in its indications. To employ it indiscriminately in all cases of constipation means complete failure to get results in many instances—and the consequent discrediting of a remedy of undoubted value when properly used.

As a matter of fact, in a large proportion of cases of constipation there is atonicity of the muscular coat of the intestines, together with marked decrease of glandular activity. Measures to impart tone to the bowel musculature and increase the glandular secretions are therefore imperative and no remedy has been found more effective for these two main purposes than Prunoids. This has proven itself a true corrective of constipation of functional origin, its effect on the physiologic processes of the bowels not only assuring a prompt restoration of intestinal activity, but with gratifying freedom from all griping or reactionary constipation. The most casual test will show Prunoids to be a true physiologic laxative that can be used with every confidence in the permanency of its benefits.

THE LIVER IN AUTOTOXIC ILLS.

The liver, as the largest gland in the body and the one that is called upon to do the most work, is to a certain extent both the

"clearing house" and the "depository" of the body's nutritional reserve. It is easy to understand, therefore, how even a slight disturbance of its functions, may be followed by serious consequences throughout the whole organism.

Realizing this, it is little wonder that the trained clinician is so keen and prompt to take steps to prevent the continuation of hepatic derangements. Undoubtedly it is zeal in this direction that has lead so many physicians to prize Chionia, for they have found it a remedy that can be relied upon not only to restore and maintain hepatic activity, but happily without exciting excessive or objectionable bowel movement. The exceptional therapeutic efficiency of Chionia therefore, in all functional disorders of the liver has made it one of the most valuable and practically useful remedies at the command of the practitioner who realizes the paramount importance of assuring hepatic activity, especially in ills of an auto-toxic character.

Physiological friction is of double disadvantage. To the patient it brings discomfort, pain and sometimes severe suffering. It sometimes causes the doctor to lose some of his usual deftness and thus impresses his patient that he is careless, or not as skilled in manipulation as he might or ought to be.

And physiological friction is further to be regretted because it is so easily avoidable in most instances.

A skidding sound hurts, but when well lubricated with K-Y Lubricating Jelly, which is Friction's Antidote, it slips securely along its accustomed or intended track.

A dragging rectal or stomach tube, strains the patient's forbearance, and often makes the dread of repetition so strong as to postpone or abandon subsequent calls.

An examining finger hurts, unless perfectly lubricated, and the word perfectly does not admit of grease or oily substances.

For grease is not an ideal agent for this purpose, it soils the patient's clothing, prejudices the doctor's reputation for consideration, and marks the user as being unprogressive and careless.

K-Y Lubricating Jelly is Friction's Antidote.

Because K-Y Lubricating Jelly is slippery—not sticky—and therefore easily adapted for lubricating instruments of penetration.

It is greaseless and water-soluble, not only clean and easy to apply, but non-soiling and removable by even cold water without soap.

The very properties that render K-Y Lubricating Jelly a perfect lubricant, make it emollient and protective.

Furthermore, K-Y Lubricating Jelly is to a striking degree soothing. Applied after a burn or a "chafe" it relieves promptly and hastens healing.

In pruritus—even in severe forms of genital, anal, diabetic, eczematous itching, K-Y Lubricating Jelly will, in a great majority of cases, bring relief, or at least grateful alleviation.

To anoint the skin in scarlet fever, measles, chickenpox, K-Y Lubricating Jelly is not only effective, but convenient and economical, since it can be used without staining or soiling the bed clothes or the patient's linen.

One use in particular will appeal to the surgeon—K-Y Lubricating Jelly makes the hands soft and supple—prevents bichloride rashes, and "improves the feel."

"Robinson's Lime Juice and Pepsin" is an excellent remedy in the gastric derangements particularly prevalent at this season. It is superior as a digestive agent to many other similar goods. (See adv. in this issue.)

"On account of the extraordinary action of Tongaline on the liver, the bowels, the kidneys, and the pores, I have found it a really wonderful medicine, because it expels so rapidly and thoroughly the poisons and germs which are the cause of rheumatism, gripp, lumbago, etc."

"I have prescribed large quantities of Tongaline, doing so nearly every day for many years with most satisfactory results, and in some cases the successes have been really phenomenal."

NASHVILLE JOURNAL

— OF —

MEDICINE AND SURGERY

CHARLES S. BRIGGS, A.M., M.D., Editor.

W. T. BRIGGS, B.A., M.D., Associate Editor.

Vol. CX.

JULY, 1916.

No. 7

Original Communications

THE TWENTY-FIFTH ANNUAL REPORT OF SURGICAL OPERATIONS AT THE BRIGGS PRIVATE SURGICAL INFIRMARY.

Reported by

W. T. BRIGGS, M.D., NASHVILLE, TENN.

The following is the annual report of surgical operations performed at the Briggs Surgical Infirmary during the season extending from September, 1915, to August, 1916. Institutional treatment of surgical cases, as shown in this report, offers the best chances of success owing to systematic care, rigid asepsis, and organized discipline. In this report such cases have been selected as may present features of special interest to the general practitioner. Minor cases, of which there has been quite a large number, have been omitted. The success of the season has been more than usually marked. Only one death following operation has been recorded. In no instance has there been infection as the result of faulty technique. The infirmary adheres to the triple mixture known as the A. C. E. as the anæsthetic of choice, though straight chloroform has been resorted to without fear in cases demanding it. Morphia and atropia have been

administered in most cases as a preoperative measure of some importance. Post anæsthetic nausea has been troublesome in a good many cases whatever the anæsthetic agent. The Claudius iodine method of preparing catgut has been found eminently satisfactory. Much of the credit for the successful administration of affairs is due to Miss M. M. Sproull, now for over twenty years our efficient superintendent of nurses. The staff of nurses deserves commendation for excellent work and faithfulness in the performance of duty. Our thanks are extended to our friends of the medical profession for their much appreciated patronage and support:

Case No. I. Fecal Fistula Resulting from Appendicitis Operation. Miss J. R., æt. 20 years, Haglersville, Tenn., entered September 4, 1915. This patient had been operated on at her home during August, 1915, for acute appendicitis. The appendix was found gangrenous and perforated. There was quite a large quantity of pus, well walled off. A large rubber drain was used and evidently it caused a pressure necrosis in the cecum, for when removed one week later there was a discharge of fecal matter which has continued since. The patient entered the Infirmary for treatment. It was thought that the fistula would close in a short time under careful dieting and judicious purgation. There was some improvement for a time but the fistula refused to heal entirely. The patient went home October 30 with the fistula unclosed. However, it gave very little trouble and would only discharge at fairly long intervals.

Case No. III. Intra-Capsular Fracture of Left Hip-joint. Mrs. N. D. R., æt. 80 years, city, entered September 7. The patient was suffering from atheromatous condition of the cerebral vessels, having slight apoplectic attacks at intervals. During one of these attacks she fell upon the floor and sustained a fracture of the neck of the femur within the capsule. A light extension was applied, just enough to con-

trol the muscular spasms and sandbags used to steady the limb. The patient had had a serious burn across the hips a year ago and efforts to prevent bedsores were begun at once, but without success. The patient was fairly comfortable for three weeks when there ensued a series of light apoplectic attacks from which she would recover in a few hours, each attack, however, leaving distinct traces. Slight paralyses appearing, clearing up and reappearing. Aphasia developed and gradually grew worse. The patient died November 11. It is thought the diseased cerebral vessels would yield and dilate, causing pressure without actual rupture. The brain would then accommodate itself, the symptoms then improving, other vessels yielding, causing another attack. Softening of the brain ensued and the patient sank into a coma followed by death.

Case No. V. Hydrocele of the Tunica Vaginalis Testis. J. M. B., æt. 36 years, six miles Gallatin Pike, Davidson County, Tenn., admitted September 9th for treatment of large hydrocele of the right side of several years standing. The enlargement was painless, but was troublesome on account of its bulk. The light test showed translucency. The testicle was normal in size and was apparently healthy. Under A. C. E. anæsthesia, the day of admission, Volkmann's operation was performed, evacuating about six ounces of characteristic straw-colored fluid. The tunica vaginalis was sutured to the skin with continuous catgut suture and the parietal tunica of the two sides of the scrotum were approximated with through and through mattress suture of catgut. Recovery was rapid and satisfactory and the patient was dismissed two weeks after the operation.

Case No. VI. Internal Hemorrhoids. Mrs. A. E., æt. 42 years, entered September 12th for relief of internal hemorrhoids of long standing. The patient was 4-multipara and had suffered extremely in every pregnancy. The usual symptoms of protrusion, occasional hemorrhage and painful defe-

cation were present. Under A. C. E. anæsthesia, full dilatation of the rectal outlet was effected and five hemorrhoidal masses, ranging in size from a garden pea to a grape were brought into view. The larger piles were transfixed and ligated in halves and the smaller were ligated after Allingham's method. The bowels were evacuated by enema on the fourth day and afterwards daily movements were secured by purgatives. The results were perfect and the patient was dismissed on the tenth day.

Case No. VIII. Cervical Adenoma. Mrs. W. B. T., æt. 36 years, Springfield, Tenn., admitted September 17th with a glandular tumor the size of a goose egg on the left side of the neck beneath the sterno-mastoid muscle, the upper set of carotid glands being chiefly involved. Under A. C. E. an inch and half incision was made in the normal crease from just below the mastoid process downwards and forwards. The sterno-mastoid muscle was exposed and drawn forwards. The gland was then dissected out, a filiform drain inserted and the wound closed with continuous catgut. The wound healed rapidly but the induration persisted and subsided after a number of x-ray exposures.

Case No. IX. Ventral Hernia following Cholecystotomy. Mrs. W. G. B., æt. 39 years, Paris, Tenn., entered September 25th. This patient had been operated on during the last season for cholelithiasis and the usual drains used. Persistent vomiting for three days followed. The drains were removed in eight days and the wound had apparently healed nicely. The patient returned home, but soon began to complain of occasional attacks of pain across the lower costal region, and it was noticed that when she coughed there was a marked bulging at the site of operation, indicating the formation of a ventral hernia. For the relief of this condition she returned to the Infirmary. Under A. C. E. the old cicatrix was removed and the hernial sac freely dissected to the large hernial opening. The sac was opened

and omental adhesions released. The neck of the sac was closed with catgut mattress suture. The margins of the opening were pared and sutured with catgut. Wormgut sutures were placed through all the tissues to the peritoneum. The posterior sheath of the rectus was closed with continuous catgut. The rectus muscle was drawn outwards over the site of the hernial opening and anchored by a few sutures. The anterior layer of the sheath was sutured, after which the wormgut sutures were tied, closing the wound. Healing was perfect and the hernia was relieved, but the girdle pains persisted and at the end of three weeks decided paraplegia developed and progressed until the patient was entirely helpless. No cause could be assigned for this accident unless circulatory disturbances indirectly connected with the operation. Evidently the girdle pains were due to the spinal lesion, whatever its nature. The patient went home, and there being no improvement, was taken to another city, where the spinal column was opened without relief, and she died a short time after going home.

Case No. XI. Bassini's Operation for the Radical Cure of Inguinal Hernia. J. M. B., æt. 33 years, entered October 4th for radical operation for cure of right inguinal hernia. The patient had been the subject of hernia for a number of years and had worn a truss most of the time. The hernia was of the oblique variety and was complete. Under A. C. E. anæsthesia, Bassini's operation was performed, the sutures for the reconstruction of the canal being of kangaroo tendon. Intestine and omentum formed the contents of the sac. The skin was closed with continuous catgut suture and a compress and spica bandage used in the dressing. The parts healed without accident and the patient returned home in two weeks.

Case No. XIV. Recurrent Appendicitis. J. M. D., æt. 40 years, a travelling salesman from near Waverly, Tenn., admitted October 10th. This patient had had a number of at-

tacks of pain in the right iliac region which had been pronounced appendicitis, and from the fact that he was on the road most of the time he was apprehensive of having an attack at some point where he could not secure skilled surgical attention and he decided to have the appendix removed. Though some time had elapsed since an attack, examination elicited marked tenderness over the site of the appendix and upon deep palpation that organ could be felt. Under A. C. E. the appendix was reached through an incision four inches in length in the right semilunar line. The appendix was bound down by a narrow band about its middle which caused a marked angulation at that point. The appendix was freed, delivered, and removed. The stump was buried with catgut purse string suture. The wound was closed by serial sutures of catgut for the peritoneum and fascia and deep silk-worm gut sutures through the entire thickness of the parietes exclusive of the peritoneum. Recovery was rapid and uneventful and the patient was dismissed on the 17th day.

Case No. XV. Multilocular Ovarian Cyst. Mrs. J. R. G., æt. 72 years, Scottsville, Ky., entered October 15th. This patient had noticed a gradually increasing enlargement of the abdomen for over two years. The growth was painless but troublesome by reason of its size, presenting as large as a pregnancy at term with twins. The abdomen was dull on percussion over its entire area except at the sides, and fluctuation was not clearly elicited. Diagnosis, multilocular ovarian tumor. Under A. C. E. a five-inch median incision was made exposing the cyst. A Spencer-Wells trochar was introduced into the cyst but nothing came out. On withdrawing the trochar the contents of the sac was seen to be a thick colloid fluid and it was necessary to incise the cyst wall sufficiently to allow of the introduction of the hand with which enough of the contents could be scooped out to permit of the cyst being delivered. On withdrawal of the cyst the rather narrow pedicle was ligated with silk braid. The parietal wound was closed by suturing the peritoneum with contin-

uous catgut, then placing worm gut sutures through the entire thickness of the wall but not including the peritoneum. The patient made a remarkable recovery and was dismissed on the eighteenth day.

Case No. XVII. Laparotomy for Pyosalpinx. Appendectomy. Mrs. R. W. C., æt. 23 years, Paris, Tenn., admitted October 15th. This patient was suffering with severe pain confined to the lower half of the abdomen. Tenderness was present in both inguinal regions. Temperature and pulse not much disturbed. On vaginal examination a mass was felt on both sides of the uterus. Under A. C. E. a four-inch median incision was made in the median line. The right ovary was found cystic and the tube very much thickened. The left tube and ovary were matted together in a mass which was removed after ligaturing the broad ligament with linen ligatures. The right ovary and tube were also removed. The appendix was found thickened and adherent and was excised and the stump buried with purse string suture. The wound was closed with silk worm gut sutures after suturing the peritoneum with continuous catgut. The patient reacted well after the severe operation and after an uneventful convalescence was dismissed October 30th.

Case No. XIX. Curettage of the Uterus for Endocervicitis. Mrs. N. M., æt. 26 years, Louisville, Ky., entered Oct. 18 for relief of a protracted metrorrhagia accompanied by usual symptoms of endocervicitis. The patient had been under treatment by her home physicians for some time and was taken sick while on a visit to friends in this city. Under A. C. E. anæsthesia, the cervix was freely dilated, the uterine cavity thoroughly curetted, and after an application of iodine, packed with gauze. A large quantity of granular detritus was removed. Bimanual examination and the use of the sound eliminated the idea of fibroids, and it was concluded that the hemorrhage was due to the degenerated condition of the mucosa. After a week of treatment with ap-

plications of iodine to the cavity of the womb and glycerinated tampons applied to the cervix, the patient was dismissed.

Case No. XXI. Double Talipes Equino-Varus. Phelps Operation. E. M. T., æt. 2½ years, northern Alabama, entered October 22d. The patient had extreme talipes equinovarus in both feet. Phelps's open operation was done on both feet. The medio-tarsal joint was freely opened by incisions on inner border of the feet and all ligamentous and restricting bands divided. The feet were forced into over-corrected position. The wounds were packed with gauze and the feet were put up in plaster of Paris splints. Hemorrhage was unusually profuse but was controlled with the gauze packing. The splints were opened on the 12th day and the wounds found well filled with granulations. Healing progressed satisfactorily and on the 21st day light braces were adjusted. The deformity was entirely relieved and the patient was dismissed in four weeks.

Case No. XXIII. Varicocele. Excision of Veins. C. T., æt. 26 years, Springfield, Tenn., entered November 2d, was the subject of a large varicocele of the left side. The patient suffered with the usual discomfort of the condition and was oppressed with sexual hypochondria. He had used a suspensory bandage with only slight palliation. Examination showed a mass of veins in the left scrotum as large as a thumb and a somewhat atrophied testicle. Under A. C. E. the veins were exposed through an inch and a half incision, the mass carefully separated from the vas deferens and ligated above and below by strong catgut ligatures one inch apart and the veins excised. The stumps of the veins were then approximated by tying the ends of the distal and proximal ends of ligatures together. The scrotal wound was closed by continuous catgut suture. Rapid healing followed and the patient was dismissed in ten days.

Case No. XXIV. Bilateral Laceration of the Cervix. Mrs. L. C. M., æt. 31 years, Mansfield, Tenn., entered November 7th. The patient had suffered from womb disease for several years and had been curetted by her physician with only temporary relief. Examination disclosed a bilateral laceration of the cervix with the attendant inflammation which explained the persistence of the symptoms and the resistance to treatment given her at home. Under A. C. E. the clefts were pared after curettage and three sutures of No. 1 catgut on each side used to approximate the parts. Examination on the 12th day showed healing perfect. The patient was dismissed on the 21st day.

Case No. XXV. Urethral Stricture. J. M., æt. 33 years, Florence, Ala., admitted November 10th for relief of urethral stricture dating back to a severe gonorrhea contracted over ten years previously. The usual symptoms—painful and frequent micturition, straining during the act, constant gleety discharge and a gradual diminution of the stream until now the urine is passed in drops. The stricture was located just anterior to the bulbo-membranous portion of the canal. The smallest sound could not be passed and it was only after repeated efforts that a filiform guide could be introduced into the bladder. When this had been accomplished, under A. C. E., a Gouley's divulsor was passed over the guide into the bladder and its blades separated to its fullest extent. Nos. 17, 18, 19 sounds, Am. gauge, were successfully passed without difficulty. Sounds of large calibre were passed every other day for a week when the patient was dismissed with directions to use the sounds twice a week for some time.

Case No. XXVII. Single Harelip. D. R. M., æt. 1 year, Putnam County, Tenn., admitted November 18th, with a congenital harelip of the right side, the cleft extending through the lip nearly to the nostril. With chloroform anæsthesia, the day after admission, the lip was dissected from its attachments to the underlying parts and the cleft care-

fully pared so that union of the parts would make a projection instead of a notch. The cut edges were approximated with a harelip pin introduced at the junction of the skin and the vermilion border of the lip and the rest of the wound sutured with fine iron dyed silk. The parts were supported with carefully adjusted strips of adhesive plaster. The pin was removed on the second day and the silk sutures on the fourth. Healing was perfect and the correction of the deformity satisfactory.

Case No. XXVIII. Fistula in Ano. F. C. T., æt. 40 years, Gallatin, Tenn., entered November 22d for treatment of fistula in ano, following a perianal abscess caused by having been thrown on the pommel of a saddle while riding. The patient was annoyed by constant escape of flatus and persistent discharge of a thin, fetid fluid. Examination disclosed two orifices situated postero-laterally each about a quarter of an inch from the anus and from each other. The probe readily passed through one passage into the rectum and through the second one into the complete one. Under novocaine anæsthesia the fistulous tract was laid open into the rectum by incision upon a grooved director and the second fistulous channel incised into the main one. The tracts were thoroughly curetted and packed with gauze. Healing was satisfactory and the patient went home in two weeks with the parts nearly healed.

Case No. XXX. Fascial Sarcoma of the Thigh. D. K., æt. 62 years, city admitted November 30th for relief of a tumor over Hunter's canal on the left side. The growth was ovoidal in shape and was about the size of a cocoanut. He recalls having been struck at this point 18 months ago and one year later noticed a small, freely movable tumor under the skin, but as it was painless, he neglected it. A few weeks ago the swelling became painful and exhibited rapid growth. Under A. C. E. a seven inch incision was made over the long diameter of the tumor and the growth, together with as

much of the fascia as could be sacrificed, was removed. The gracilis muscle was spread over the tumor, requiring its division and the removal of its middle third. The fascia was closed over the muscles, and after placing a small drain at the lower angle, the wound was closed with continuous catgut. The wound healed rapidly and the patient was back at work in two weeks.

Case No. XXXII. Fibroid Tumor of the Uterus. Suprapubic Hysterectomy. Mrs. T. L. B., Arkansas, æt. 50 years; entered December 3d. This patient after passing her menopause gave a history of a gradual enlargement of the abdomen with frequent excessive metrorrhagia. Examination showed a marked enlargement of the abdomen produced by a clearly defined solid tumor about the size of an adult head. The growth was painless, hard upon palpation and was to some extent movable. The uterine probe discovered a marked increase of the depth of the uterine cavity. Under A. C. E. the growth was exposed by six inch median incision, through which the vessels were ligated and the womb and appendages removed. The stump of the womb was covered by suturing the edges of the broad ligament together from one side of the pelvis to the other. The parietal wound was closed in the usual manner. The tumor was a globular submucous fibroid involving the entire anterior wall of the uterus. Uneventful recovery ensued and the patient returned home three weeks after the operation.

Case No. XXXV. Chronic Appendicitis. Mrs. F. J., æt. 21 years, Hopkinsville, Ky., admitted December 11th. This patient had just recovered from a severe attack of appendicitis. Under A. C. E. the abdomen was opened by four inch incision through the right rectus sheath—Battle's incision. The tip of the appendix was readily located. The appendix six inches in length was buried behind the cecum and ileum, its distal inch only being free. The meso-appendix was secured with catgut and the appendix removed. The stump

was buried with a purse string suture. The parietal wound was closed as described in previous cases. The patient made an uneventful recovery and was dismissed December 27th.

Case No. XXXVI. Stone in the Bladder. Medio-Bilateral Lithotomy. F. D., æt. 12 years, Brush Creek, Tenn., entered December 14th with symptoms of vesical calculus. The cardinal symptoms of stone, frequent and painful micturition, itching and pain referred to the head of the penis, straining during the act were present. The introduction of the stone searcher at once discovered the presence of stone and manipulation with that instrument demonstrated fairly the size of the stone and its probable density. Under A. C. E. medio-bilateral lithotomy was performed and the calculus readily grasped and removed with the stone forceps. Hemorrhage was slight but a perineal tube and gauze was used to facilitate drainage. The tube was removed in twenty-four hours. The stone was ovoid in shape, of the oxalate of lime variety and was nearly an ounce in weight. The wound healed rapidly and the urine passed per vias naturales on the fourth day. The patient returned home two weeks after the operation.

Case No. XXXVIII. Recurrent Appendicitis. Mrs. R. M. A., æt. 48 years, Paris Tenn., admitted December 24th. A number of attacks of appendicitis at varying intervals from the last of which the patient was just recovering made an operation very necessary. On account of the fact that the patient was very corpulent an eight inch incision was made through the right rectus sheath. The extent of adhesions was unusual. The appendix was buried in dense adhesions and surrounded by pus. After removal of the appendix its stump was invaginated with purse string suture and the parietal wound closed in the usual manner. A rubber drainage tube was used. The patients condition after the operation was not good but she rallied after the persistent use of the Murphy drip for twenty-four hours. The drainage tube

was removed on the second day. The patient recovered slowly and was dismissed January 18th.

Case No. XL. Cholecystotomy. Mrs. J. F. D., æt. 52 years, Linton, Tenn., admitted January 8th. The patient was a large, fleshy woman, who had suffered greatly from pain in the region of the stomach, occasional icterus, frequent paroxysms of colic and great tenderness on perpendicular percussion over the gall bladder. Diagnosis, cholecystitis with probably gallstones. Under A. C. E., January 9th, the gall bladder was exposed through a six-inch incision along the outer side of the right rectus muscle and that organ found greatly distended. Only a small amount of fluid was evacuated with the aspirator and after the parts had been walled off from the general cavity by gauze pads, the gall bladder was incised and 214 stones about the size and shape of small beechhnuts were removed. The ducts were carefully examined and found free of concretions. Rubber drainage was used, both in and by the side of the gall bladder and the wound closed by seriatim sutures reinforced by five silkworm gut sutures. The drains were removed on the 8th day, after which there was very little discharge, and the wound healed rapidly throughout its entire extent. The patient returned home, but in a short time began to complain of pain in the region of the operation. This continued for some time, when she was brought to the city and operated upon by another surgeon for carcinoma of the stomach and died from the effects of the operation.

Case No. XLI. Carcinoma Uteri. Mrs. J. S. E., æt. 51 years, Paris, Tenn., admitted January 9th. Mrs. E. had presented for treatment of carcinoma of the uterus in April, 1915, at which time it was found that the disease was too far advanced to admit of complete hysterectomy and the diseased cervix was removed as thoroughly as possible with ecraseur scissors and sharp curette. On her return on the above date, the vaginal vault was found occupied by a fun-

gating mass of carcinoma, which bled freely upon touch, and the disease was rapidly decimating the patient's strength. Under A. C. E. this mass was removed as far as possible with scissors and curette until apparently the entire uterus had been gouged out. The cavity left was packed with gauze and after a week the patient dismissed. Since her return home the patient's health has been variable, though for most of the time she has been able to go about.

Case No. XLIV. Gunshot Fracture of the Fibula. L. T., æt. 8 years, Craggie Hope, Tenn., entered January 23d. This little patient had received the ball from a 22 calibre rifle, the wound of entrance being about four inches above the external malleolus, the course of the ball ranging downwards. The ankle and foot were swollen and a radiograph was made showing the fracture of the fibula and the fragments of the bullet, two fragments had passed as low as the malleolus. The small missile had shattered into quite a large number of fragments and no effort was made to remove them.

The wound was dressed and an external lateral splint was applied, treating the case expectantly. There was no infection, the swelling subsided slowly and the patient was dismissed February 6th.

(To be continued.)

Selected Articles

THE CARE AND COMFORT OF THE SURGICAL PATIENT.

By A. C. L. PERCEFULL, Louisville, Ky.

The writer was prompted to choose this subject for a paper, because of the great neglect on the part of the surgeons of this one most essential part of the treatment of the surgically sick. Too little is written upon this subject in our text books and journals and spoken of in our societies. Too little stress is put upon it by teachers in our medical schools. Little or no attention is paid to it by many surgeons in their practice.

So many doctors are so eager to become surgeons before they have had experience enough with the sick to be able to distinguish between real and apparent suffering. So intent are they on their operative technique, that they think of nothing but the operation and lose sight of this one great essential—making the patient comfortable before, during or after the operation.

The sooner surgeons or would-be-surgeons realize that there is more to surgery than the wielding of the scalpel, the sooner they realize that it is just as much their duty to make their patients comfortable as it is to operate upon them, the sooner will a great deal of unnecessary suffering and discomfort be relieved, that now goes by unnoticed or unheeded or through ignorance unrecognized.

In all probability nothing new will be mentioned in this paper. In all probability you who do surgery will say that you do all you can to make your patients comfortable. But, do you?

No, you do not. It has been my observation for a number of years that surgeons, either through indifference, negligence, or ignorance, or through fear of breaking some time-honored practice or custom in treating operative patients, omit much that might make their patients more comfortable. Some of these time-honored customs will be mentioned later.

Surgeons are too prone to say, "Oh, well, you know you must have some pain and you will necessarily be uncomfortable. Now just try to be patient, you are going to be all right, you are fixed up fine now." Then with this same feeling of satisfaction they go outside and tell the patient's family how successful the operation was, etc. This is done so much that the expression, "The operation was successful," has become universal, no matter what happens to the patient. Surgeons are too prone to lose sight of the fact that their patients are still human and subject to all the ills, discomforts, etc., to which the human flesh is heir—and then some.

The scope of this paper will not include any surgical procedure or technique, save such as might bear upon the comfort of the patient. By comfort we wish to imply both mental and physical, for we feel that they go hand in hand or at least one often has an influence upon the other.

The surgeon's duty to his patient does not begin when he takes his scalpel in hand, nor does it end when the operation is completed. For the sake of convenience we will take up the three stages in which the surgeon is called upon to care for operative patients.

First, the pre-operative stage.

Second, the operative stage.

Third, the post-operative stage.

In the first stage we desire to call your attention to a few things that are often or nearly always neglected. Just as soon as an operation is decided upon, the surgeon's duties have just begun. It is in this stage that so much can be done to relieve the patient's mind and anxiety, thereby aiding the successful outcome of the case. Take the patient into

your confidence, talk plainly and freely with him, make him feel that you are interested in him. Do not boast of the number of patients and serious cases you have on hand, for he will know then that your thoughts and mind might be elsewhere, and that he might be neglected for some of the other very serious cases you have. You can show your patients that you are interested in them without making them think their case is terribly serious. Explain fully in a plain, clear way what you contemplate doing and what results you expect, at the same time assuring them that they will not be allowed to suffer unnecessarily and that everything will be done to make them comfortable, and then, keep your promise.

We feel that the patient's great fear is that of suffering and discomfort incident to the operation rather than the possibility of dying. Be frank and honest with them and gain their confidence, and you will add a great deal to their mental comfort. Study their eccentricities, their habits, as well as their general makeup both mental and physical. Try to learn of any idiosyncrasies that they may have. In the latter, the family physician can be of great assistance. Right here let me state that the physician should be kept in the case from the beginning to the end of the same. In the first place it is due the patients, for they have confidence in the family doctor. When their doctor is around their anxiety is relieved to a great extent. They have been accustomed to consult him when in distress and it is only natural that they would want him when about to undergo an operation. In the second place you might need him. He may be of very great assistance to you just for the reason that he probably already knows more about the patient than you will be able to learn during the whole time he is under your care. In the third place it is due the doctor. He should not be ignored as we have seen him ignored numbers and numbers of times.

If the patient is to be given a general anæsthetic, his condition should be fully explained to the anæsthetist. He should, if possible, visit the patient the day before the operation, to make his own physical examination, explain fully

about the anæsthetic so that he will not be frightened when the same is administered. If this is done we feel that the patient will have more confidence in the anæsthetist and not fear anæsthesia so much, for the fear of the anæsthetic is second to none, and incidentally we believe the anæsthetic fee will be paid more freely because he will feel that you have taken some interest in him and have done much to earn your fee.

The assistant also should not be kept in the background. He should at least be introduced to the patient, or better still he should, if possible, visit him with the surgeon and see his condition before being brought to the operating room. In the first place it is due the patient for two reasons. He should know all who are to take an important part in his operation, and then, too, suppose for some reason the surgeon is unable to visit the patient and do the dressing, etc., the assistant goes in an utter stranger, is compelled to explain that he is so-and-so's assistant and helped to operate upon him. This may be satisfactory, but still the patient not knowing possibly that there was an assistant may feel that he doesn't just exactly understand the case, etc., whereas, if he had met the assistant beforehand and knew that he was familiar with the case his anxiety would be much less.

Then, too, it is due the assistant because if he did not want the experience (and often that is all he gets) he would not be assisting anyone.

The operation should be discussed by the surgeon with the assistant, the entire procedure mapped out as nearly as possible so that the operation may be performed with smoothness and dispatch. This is doubly essential where a local anæsthetic is to be employed. The reason for this is obvious. There should be a thorough understanding so that as few words be spoken in the operating room as possible. Those of you who have been assistants know how seldom the above is done. It is useless to say that every minute of time saved in the operating room will aid in the successful outcome of the case.

It is hardly necessary for me to say that the patient should be relieved of all worry about selecting the room at hospital, making arrangements, etc. In this the surgeon can be of great assistance because he is usually familiar with the rooms, prices, etc.

And just here we wish to make a few remarks about hospital rooms. Did you ever lie flat on your back, alone most of the time, for hours, days, weeks and months possibly, gazing at four bare walls and the ceiling, with nothing to break the monotony? Of all the gloomy, lonesome, unattractive, cheerless places the average hospital room heads the list. Will not the hospitals ever realize that the more homelike and cheerful they make their rooms the better satisfied, contented and more comfortable will their patients be? We feel that it is time the doctors were demanding more cheerful surroundings for their patients.

After all arrangements have been made and your patient is settled in the hospital, certain preparations are necessary and usually carried out the day before the operation. Orders for these should be explicit and not general. Don't say, "Prepare patient for such and such an operation," but tell just what you want done. How often have we seen patients sent to the operating room with insufficient preparation or preparation that doesn't meet with your approval. In nine cases out of ten it is because explicit orders have not been given.

Do not lose sight of the fact that your patient's first night in the hospital is often and without exception, we believe, a very trying one. He is in strange surroundings, dreading more or less what the morning will bring and consequently he does not rest, and if he does not, what condition will he be in to undergo what is before him? How does a well person feel after not resting at all for a whole night? We think it is your absolute duty to see that your patient has some simple remedy to help him rest and sleep the night before the operation. We have, and so have you, seen this very thing, neglected time and time again.

We do not believe in thoroughly purging every patient, because this has a tendency to weaken him and we know it dehydrates the tissues and naturally increases the thirst, and anything that will increase post-operative thirst we know is harmful. It also has a tendency to increase postoperative distension. We believe that castor oil is the ideal cathartic.

We also feel that it is harmful to starve your patient before operation, as it has a tendency to weaken him, cause constipation and postoperative distension, thereby adding to his discomfort.

Having been properly prepared and given a good night's rest we bring him now to the second stage.

The first important thing to be remembered in this stage is "to be on time,"—don't for any preventable reason keep your patient waiting. Every minute you are late seems an hour to him. Don't fail to see him as soon as you get to the hospital, speaking an encouraging and cheerful word to him. It will increase his confidence and relieve the mind. By all means see that his physician is there.

If he is able, let him walk to the anæsthetic or operating room as the case may be; let him be as near normal as possible. See that everything is ready in operating room before starting the anæsthetic. If local anæsthesia is to be employed be sure that everything is ready and the procedure is thoroughly understood as far as possible by all operating room attendants. Avoid conversation and commotion as much as possible.

Just a word as to the anæsthetic. Of course, the anæsthetic should be selected such as will suit the case. It is questionable whether there is very much difference in after-pains of patients operated upon under local and those operated upon general anæsthesia, with the exception of quinine and urea hydrochlorid, the effect from which we know lasts for some time. As to shock, there is possibly a slight difference in favor of the local anæsthetic.

This we do know, that the general anæsthetic often causes great discomfort from nausea and vomiting. So it would

seem that where it is possible local anæsthesia should be used, for the comfort of the patient if for no other reason. Then, too, patients fear to be put to sleep. Add this to the fear of the operation and its outcome and it is easy to see why there is so much anxiety. If you can assure him that it will not be necessary to put him to sleep, you will tranquilize his mind, thereby add to his resistance which has much to do with the successful outcome of the operation.

Now for the operation.

First of all the position of the patient on the operating table should receive more consideration than it does. It should be as natural as possible, yet in such a position so that the part to be operated upon is easily accessible. Try not to interfere with either respiration or circulation. See that no important nerves are unduly stretched and that pressure is taken off same. The table should be padded sufficiently thick to prevent pressure pains.

If the lumbosacral curve is very pronounced or the patient has prominent buttocks, a small pillow should be placed under the small of the back, by so doing you will relieve a great deal of the postoperative backache which is nearly always complained of. The same precaution should be taken about the head. A pillow should be placed under head of size corresponding to prominence of the shoulders.

If it is necessary to put him in any position that will violate any of the above precautions, do not maintain such position any longer than is absolutely necessary.

It is needless to say that the patient should not be "slopped up" in preparing the field of operation for obvious reasons.

As to the operation itself, will say very little except to call attention to a few precautions that will have a bearing on the postoperative comfort of the patient. It is needless to say that it should be done as rapidly as possible, consistent with thoroughness and with as little traumatism as possible to the tissues, exploring and handling the vital parts as little as possible.

See that sutures and ligatures are so placed that they will not include unnecessary tissue or pull in such manner as to cause pain. In closing your incisions see that the parts are not in an unnatural position, because when they assume the natural position there may be such tension on the sutures as to cause constant pain. In closing abdominal incisions, do not make such tension on peritoneal sutures, to do so is unnecessary and will cause pain, the same is true of the skin sutures, but the sutures in the fascia may be and should be put in with a little more tension, for this is the main layer in your closure, and tension here will not cause pain. Your duties are not ended with the closure of your wound. You should apply the first dressing at least. Do not leave this to an inexperienced assistant or nurse. This first dressing is very important. It should be put on with a view to comfort, supporting the parts, securing the dressing to the wound and should be done well. The dressing badly put on often causes as much discomfort and pain as the operation itself.

We are now approaching the stage which we will lay particular stress upon, not at very great length, however. It is in this stage that many surgeons otherwise brilliant and capable fail. Neglect of details in caring for the postoperative conditions has lost many patients. The postoperative treatment is just as essential and as important as the operative procedure, and oftentimes the successful termination of a case depends largely, yes nearly altogether, upon the after treatment. In this stage you are pretty apt to need the family physician. Have him anyway, for the chances are that the patient would rather see him than you. He will feel reassured after a visit from him.

The clothes, which are usually wet, should be removed and dry ones substituted. Patient is put to bed, which has previously been warmed by hot water bottles. He should have an attendant constantly at the bedside until he regains consciousness. This often is not done, but it should be. The surgeon should see that it is done. Just as soon as patient has fully recovered consciousness the chances are that he will

ask for water. Give him some, not all he wants, of course, but let him have water. Of all the cruel and inhuman things connected with surgery, the cruelist is to refuse to give a patient famishing, almost dying with thirst, water. Think of the human organism as an ever active chemical laboratory, then think of the havoc introduced into the orderly process of this intricate organism by flooding the tissues with anæsthetic poisons themselves, the manifold groups of changed secretions and cellular debris from this cause; now and then subtle poisons liberated or created by operative wounds and manipulations, then add to this baneful series by the stagnation of lymph flow caused by the deadly immobility of a supine posture. Thus having surcharged the tissues with abnormal secretions and imprisoned them more securely by the inhibition of muscular activity; add the final result of denying admittance to that well nigh universal solvent of effete abnormal secretion—water. Think of this, then wonder that the delicate human machine will survive such treatment. Take a well man and give him an anæsthetic for a half, three-quarters or an hour or longer, put him to bed, don't allow him to move and refuse him water, if you don't soon have a sick man, then miracles have not ceased. See that he gets water, if you leave it to the nurse she won't give it to him.

Suppose he does vomit, the chances are he would have vomited anyway. If you have done your surgery well and applied your dressings properly, then vomiting as a rule will do no harm. It is not in the scope of this paper to give treatment, but it goes without saying that vomiting should be relieved as much and as soon as possible. We do not feel that water given in moderation will cause dilatation of the stomach, as some contend. This much we do know, that water is one of the greatest diluents of poison in the system and it will help to get rid of the same by flushing out the kidneys and bowels and will also make the skin more active. Of course, there are cases, such as where the stomach is operated upon where anything by mouth is contraindicated, then

water can be given by proctoclysis. This relieves thirst very successfully. Give him water, and plenty of it—but you say you do. No, you don't. There are too many patients who have gone through this ordeal that will testify against you. It is needless to say that some opiate should be given to relieve pain, and something given to relieve extreme nervousness.

Then another thing that is not done, change of position. Nothing rests a tired, bed-fast person so much as change of position, and nothing tires one so much as maintaining the same position for a great length of time. Try it yourself. Oh! but you say, they must lie flat on their backs on account of the wound. Again let me say that if you have done your surgery well, and applied your dressings properly, changing the position sufficiently to relieve discomfort will do no harm. It will do an infinite amount of good.

The Fowler or modified position is oftentimes a relief and many times beneficial. Where there is vomiting it may relieve it. It is beneficial in diffuse peritonitis, or to confine peritonitis to the pelvis. This position is essential in old or debilitated patients.

Again, let us insist upon changing the position frequently. In abdominal cases a pillow under the knees will give great relief, as it relieves the tension on the abdominal muscles. When the patient is on the side, a small pillow placed between the knees prevents discomfort and pain, due to pressure of one knee against the other.

See that the nurse or attendant cares for the patient's hair, nails, mouth, teeth, and any little details of the toilet that will make him comfortable.

Find out the habits of patients, and if consistent, let him, as soon as possible, go back to them. If he is a smoker, let him smoke. In other words, don't subject the system to any more shock by withholding anything that it is used to receiving. Let the patient, as soon as possible, consistent with his condition, assume his normal life.

Let me repeat here, be prompt. When you tell a patient you will visit him at a certain time, do it if possible. Do your dressings at regular times if possible, for by so doing you will relieve your patient of a great deal of anxiety. Do not fail to have your assistant help if possible. It gives the patient confidence in him, so that if for any reason he should be called upon to care for the case, the patient will be better satisfied.

Be firm, but sympathetic. The surgeon who does not mix some sentiment with surgery, we feel, falls short of fulfilling his commission.

Pay attention to details, do not fail to do the little things that relieve your patient.

We all know how the laity feels towards surgery, and justly so, and it is high time that the surgeons were doing something to dispel this feeling. The best way to do that is to take such care of your patient that he will be more comfortable.

Of course, it is understood that all of the foregoing applies only to surgical cases in general, and not to any special case or condition. There are many more things that could be said upon this subject, and probably there have been things mentioned that could have been left out, but if this paper causes anyone of you to give more consideration to the comforts of a single patient, we will make no apologies for having taken up so much of your time.—*The Medical Brief*.

THE CANCER PROBLEM.

By CYRUS L. TOPLIFF,
New York City.

Cancer is now recognized as being one of the most dangerous and unfathomable diseases ever known.

The most skilled physicians have made a deep and scientific study of the disease for many years and yet no tangible progress has been made, and at the present time no more is known about its fundamental cause, or its cure, than a hundred years ago.

There are only two possible remedies now recommended by the medical profession; one is to destroy the diseased tissue by the use of radium, X-ray or heat, and the other is to remove it by a surgical operation in its earliest stages, and even then these treatments seldom secure a permanently favorable result, except in the earliest stages and in certain varieties.

When the disease is far advanced, either of these treatments may result in very serious effects, by the poison being conveyed through the blood circulation to other parts of the body where there may be a certain form of unhealthy tissue, which would furnish just the proper medium for its continued development.

As the disease often is not cured by medical treatment, and is seldom permanently cured by any surgical operation, it is quite evident that the medical profession will have to include entirely new lines of research in order to meet with a substantial success.

It is, therefore, a matter of profound satisfaction that the master minds in research work the world over are centering their efforts in this direction more intensely than in any other, and ere long a cure will surely be found.

Medical statistics show that during the year 1915, in the United State, 80,000 deaths resulted from this disease and of this number 67,000 were over 45 years of age.

The highest medical authorities have finally decided that cancer does not result from a germ of any kind but from some unknown form of bodily poison which starts and spreads through unhealthy or diseased tissue suited to its propagation, and ultimately destroys that tissue. Another point on which they agree is that the disease is not hereditary or contagious. This information will greatly relieve the minds of many thousands of people who, if the disease has previously existed in any branch of their family, are in constant fear of it, which very thought is a powerful factor in helping to create a cancerous condition. It has also been decided that the fundamental lesion may be present in the body for many years before the disease becomes fully developed, or the person is aware of its presence.

Perhaps the following suggestions may be worthy of consideration:

Without the mind, the body is only material matter, and therefore its conditions are largely, if not entirely, under the influence of the mind. If the medical profession will make a thorough scientific study of the relations between the mind and body, they will soon discover the fundamental cause of many diseased conditions which are at the present time a mystery.

Good thoughts induce good health, but bad thoughts, such as worry, fear, hate, spite, never fail to leave an injurious effect on the body by weakening the whole nervous system; and intense, long continued fear often attracts into manifestation the thing so dreaded.

It is impossible for cancers, tumors, tuberculosis, or any form of ulcerations to occur in any part of the body unless unhealthy or diseased tissue is present to form the necessary base for their propagation.

It is also impossible for said tissue to become diseased or unhealthy unless the nerves supplying life and action to that particular part of the body have first become impaired, so that they are unable to fulfill their natural functions.

As the mind is the leading power which can overstrain or weaken the nervous system, it is reasonable to suppose that we must first study the action of the mind over the body before we can discover the real fundamental cause of any inflammatory or malignant form of disease.

Fear and worry are synonymous, and inseparable in a person's mind. Therefore, fear is really the fundamental cause of many diseases, and the various forms of such depend largely on what particularly harmful thoughts are combined with fear in each patient.

If the medical profession fail to solve this difficult problem, it is possible that some "layman," who has given much thought and study to the subject, and experimented on scientific lines, may ultimately succeed in demonstrating the fundamental cause, and if it can be accomplished, then much of the mystery of all diseases will disappear and health and happiness will be much more general than at the present time.

Extracts from Home and Foreign Journals

SURGICAL

COLD ABSCESS OF TONGUE.

Venot and Arnould, *Gaz. Hebd. des Sciences Med. de Bordeaux*, Dec. 12, 1915. The patient was a man of fifty with laryngeal and pulmonary tuberculosis. The tumor was first noted in May and had enlarged to the size of a hen's egg. There were several small lymph nodes on the same side of the neck and one had suppurated on the opposite jaw. On evacuation, the pus showed tubercle bacilli but no growth was obtained from cultures. Several punctures were made followed by injection of iodoform in ether, the tumor now being of the size of a small nut, sclerotic and probably cured.—*Buffalo Medical Journal*.

CHOLECYSTITIS.

B. F. Zimmerman, in the January issue of the *American Journal of Surgery*, discusses the diagnosis and surgical treatment of cholecystitis.

Clinically the diagnosis of cholecystitis is not always easy. The classical symptoms—pain, vomiting, and icterus—may be absent. The last—jaundice—is usually late and points to obstructive lesions. Epigastric pain with tenderness over the gall bladder are important. Muscular rigidity is usually indicative of distension of the gall bladder. Of course, the history of preceding attacks is always helpful. To be sure of the diagnosis, it is necessary to exclude the commoner conditions as gastric and duodenal ulcer, appendicitis, kidney, and ureteral calculi, dermoid cysts and even extrauterine pregnancy.

In the surgical treatment of cholecystitis, there is a wide difference of opinion. Mayo holds that in cases where there is little damage to the gall bladder walls even in the presence of calculi, 90 per cent may be cured by removal of the stones and drainage of the gall bladder. When the mucosa of the gall bladder wall is extensively damaged, cholecystectomy is the better procedure. Mayo also claims that in 50 per cent of the cases which are drained and no stones found a recurrence of the gastric symptoms takes place in a few months. From the foregoing it is apparent that cholecystectomy is the preferred procedure in the absence of stones.

"Recurrent gall stones," the author thinks, are due to calculi overlooked at the original operation.

Under no circumstances should cholecystectomy be performed during an acute attack of cholecystitis with or without calculi.—*Medical Review of Reviews*.

BLOODLESS OPERATION FOR HEMORRHOIDS AND INCOMPLETE RECTAL PROLAPSE.

This operation comes from somewhere in France. The author is Major McKelvey Bill, M.D., and it is reported in the British Medical Journal for March 18, 1916.

The operation is indicated in cases in which four or more large piles occur and in mild grades of prolapse; in other words, it is indicated where a Whitehead operation is indicated, but has the advantage of being almost bloodless and less liable to complications.

Operation—After dilatation of the sphincter, a long silk suture is passed through the junction of the skin and mucous membrane in the mid-perineal line. This is left untied and is used as a tractor; two similar sutures are passed on either side, so that when traction is made on all three the extruded mucous membrane is converted into a triangle. Each side of the triangle is dealt with separately. The portion between two tractors is clamped to mark the area for excision, taking care to remain above the sensitive area. On

removing the clamp a furrow is left in which the suturing is done. Two Hagedorn needles are threaded at either end of a continuous silk suture. The first stitch is placed at the beginning of the furrow and tied in the middle of the thread. The two needles are then passed through from opposite sides at the same point—a cobbler's stitch. Each stitch is pulled taut, but not tied. The suture is continued in this manner at $\frac{1}{4}$ -inch intervals, until the end of the furrow is reached, where it is tied. With the scissors the redundant tissue is now cut out 1-16-inch from the suture line. The narrow ridge left is lightly touched with the thermo-cautery. The other two sides of the triangle are similarly treated, and the tractor sutures removed.

An opium suppository gr. 7 extr. opii, is inserted, and a rubber tube (3-8 by 3 inches) wound with iodoform gauze and well smeared with vaseline. This is left in situ until the morning of the fifth day post op. Bowels are kept constipated with opium and liquid diet for four days. At beginning of fifth day 1 oz. castor oil is given, and four hours later 6 oz. warm olive oil is injected through the tube, which is then gently removed. In a series of twenty-one cases this operation has given satisfactory results.—*Pacific Medical Journal*.

FLAPLESS AMPUTATION.

The method which gives the best chance of life to the patient is that which leaves the nutrition of the stump unimpaired to the end; in which, in other words, the nutrition is not cut off by the undermining of flaps; and now, after nearly two years experience, Fitzmaurice-Kelly considers gaseous gangrene as an absolute indication for a flapless amputation. Other conditions for which he employs the method, though for different reasons, are certain cases of compound comminuted fractures and of multiple wounds. The advantages claimed for this method are: That it saves life; that it saves length of limb; that the risk of secondary hemor-

rhage is lessened; that it arrests the spread of infection, whereas in flap amputations sepsis often recurs in the flaps, and spreads up from their base; and that it is possible where no other method is possible. As to the technic: the skin and deep fascia are divided, usually in circular fashion, but sometimes more skin can be gained by making the incision oblique; after retraction has occurred the muscles are divided at the level of the retracted skin—not too quickly, so as to allow a retraction of the layers; then the bone is sawed flush with the muscle; vessels are secured and nerves carefully shortened. The surface is slightly concave at first if the operation has been done properly, but soon becomes convex from further retraction. This, however, once the face is fairly clean, is overcome easily by extension. Strips of strapping are laid up the limb to the joint above, fixed with circular bands, and then carried down to a large ring of malleable aluminum to which a weight extension is attached. In the middle the stump is easily accessible for dressing. In this way all that has been lost by retraction can be regained rapidly, and it is rarely necessary to do more than remove a length of bone with a Gigli's saw.—*The Journal of the Am. Medical Association.*

NEPHROPEXY.

R. H. Gilpatrick says that our study of the anatomy and physiology of the kidney and its means of support lead us to the conclusion that the organ is never a fixture and that mobility without symptoms may exist to a marked degree. It is therefore neither wise nor necessary to attempt to fix a pathologically movable kidney in its exact anatomical position, an approach to within one inch being safe and sufficient, as well as much easier of accomplishment. The technique of various operations is given, with reports of cases, and the writer makes a general summary of his position as follows: A mechanical problem is best solved under good mechanical principles. Success is dependent upon the de-

gree to which normal anatomical and physiological conditions are approached. The kidney may not be wounded, fixed or constricted with impunity. Decapsulation, either partial or complete, does not impair kidney function. The most rational method of securing the kidney in position after it has become a wanderer to such a degree as to demand operation, is that of removing the cause and aiding in the reconstruction of natural support. Any permanent artificial support is dangerous if not completely destructive to the kidney's functional activity. The rolled-up and trans-fixed capsular flap offers a perfectly adequate hold for one end of the anchorage, and the muscular and fascial layers of the loin the same for the other end without sutures which emerge through the skin. If the anatomical relations of the kidney can not be permanently readjusted without destruction of its fundamental activity it deserves to be either let alone or removed.—*Medical Record*.

MEDICAL

THE USE OF BOILED MILK IN INFANT FEEDING.

Dr. Joseph Brennemann, of Chicago, read this paper. He stated that the use of boiled milk in digestive disturbances was quite general and if it was good for the sick baby there seemed no reason why it should not be good for the well baby. The advantages of boiled milk were both bacteriological and physiological. The bacteriological advantages were understood by all. The physiological advantages depended upon the difference in the coagulability of the casein in boiled and raw milk. Boiled milk formed very hard curds which could only be broken up by peripheral digestion. In some instances the curds in raw milk were so large and so hard that they could not be gotten rid of even by vomiting. One of the reasons for the good results obtained with *eiweiss* milk was that it formed almost invisible curds. One never observed bad results in changing a baby from raw milk to boiled milk

while the reverse was by no means true. The writer referred to the recent tendency to attribute all digestive disturbances in babies to the fats and carbohydrates in the food; he felt that the casein was also a factor in the production of symptoms of indigestion. The commercial pasteurization of milk was open to the objection that the milk was kept 24 hours after it had been pasteurized. Milk boiled at home was preferable to pasteurized milk; pasteurized milk might be considered as belonging in the raw milk class. If milk boiled at home was as popular as pasteurized milk there was every reason to believe that babies would suffer less.—*Medical Record.*

MEDICAL TREATMENT OF DIABETICS.

The material for Berkman's report was drawn from the histories of the patients operated on in the Mayo Clinic during the past year in whose urine the presence of sugar was positively demonstrated. The purpose was to establish a method of determining the operability of such patients, and reasonably rapid and safe course of treatment preparatory to and after operation. The first object was to render the patient's urine sugar free as soon as possible; and for this no better procedure was found than that advocated by Allen. The use of sodium bicarbonate has become routine; and, Berkman and his associates feel that it has contributed in no small degree to the recovery of their patients. It is used in dram doses by mouth six to eight times daily, three or four days before the operation. This treatment is resumed as soon as possible after operation. Should the surgeon find it necessary to give rectal salines, soda is administered in this way also. They have on two or three occasions found it advisable to give it by intravenous injections in 5 per cent solution. During the postoperative observation the urine is watched carefully, although keeping it free from sugar is more difficult, and is not as important as before operation. Twenty-six glycosuric patients came to operation. Two pa-

tients died, a mortality of 7.7 per cent. Eight patients were passing less than 10 gm. of sugar in twenty-four hours on an ordinary diet; and, other conditions being satisfactory, they required very little preoperative treatment, and that largely for the purpose of observation.—*The Journal of the American Medical Association.*

OCCULT BLOOD IN THE STOOLS.

Gregerson tabulates the findings as 147 patients supposedly free from ulceration in the digestive tract were examined. The subjects were the inmates of the medical ward, examined without discrimination. The ages ranged from a few months to 87 years. The diet in twenty-eight cases had included meat within a few days and the findings were constantly positive in this group. In the 1,310 specimens from 147 patients who had had no meat within four or five days, the findings were constantly negative in all but eighteen. Even in this group the reaction was negative in most of the tests. The diet must not contain meat, but milk, butter, eggs, fruit, bread, potatoes, tea, coffee and cocoa and also well cooked fish do not modify the response. As the various patients had been taking different drugs, the constantly negative reaction confirms that certain drugs do not affect the response to the test; namely, bismuth, iron, arsenic, mercury, barium sulphate, salicylic acid, tannalbin, antipyrin, hexamethylenamin, camphor, senna, and castor oil. None of these drugs or their derivatives seemed to modify in the least the response to the test. His comparative study of the various technics for determination of occult blood in the feces confirmed the superiority of the benzidin test. It is far simpler and quicker, while it is fifty times more sensitive than the Weber or other technics. This test applied to scraps of feces taken as far apart in the stool as possible gave always the same findings, confirming the regular blending of the feces throughout. Ingestion of four doses of 0.3 gm. blood, each, was followed by a positive response to the ben-

zidin test without fail. The benzidin solution must be made fresh each time, dissolving 1 per cent pulverized benzidin in equal parts glacial acetic acid and hydrogen dioxid. Ten or twenty drops are then dropped on the thin layer of feces on an object glass. In less than a minute a green, bluish-green or blue tint appears in case of positive findings, and the tabulated data confirm the clinical importance of a positive response.—*The Journal of the Am. Med. Asso.*

OBSTETRICAL

THE TREATMENT OF PUERPERAL SEPSIS BY UTERINE SUCTION AND DRAINAGE.

Norman Porritt is of the opinion that the suction tube has all the advantages with none of the dangers of the uterine douche. In at least two cases he has seen the uterine douche convert a smart sapremia into a rapidly fatal general infection, while in another case it set up acute fatal general infection, while in another case it set up acute, presumably chemical peritonitis. While he was administering the douche the woman was seized with agonizing abdominal pain, which was quickly followed by general collapse and rapidly developing abdominal tenderness and distention. The douching was at once stopped, but the patient died five hours after the onset of the acute pain. To illustrate the patulousness of the fallopian tubes, Dr. Goodall narrates a case of congenital atresia of the sigmoid. The abdomen was markedly distended, and dark liquid blood was coming in spurts from the vagina. On operating the abdomen was found full of blood and meconium, the sigmoid having ruptured. At the autopsy, four hours later, the blood was still coming from the vagina. In the cadaver Dr. Goodall has injected methylene blue into the uterine cavity with douch can and canula, imitating as closely as possible the technique of operative work. With a pressure of only two feet of elevation, and in some cases only eighteen inches, and with a temporary ob-

struction to the outflow, such as is frequently caused by clots and fragments of tissue, he was able to send fluid into the peritoneal cavity through the fallopian tubes. Hence, he says the risk of chemical peritonitis, not to speak of septic peritoneal contamination. Uterine suction tells us the conditions in the interior of the uterus. It is most instructive to watch the gradual alteration of the stuff withdrawn from a thick offensive fluid, loaded with semi-solid purulent masses, to a clear red liquid, and from that to an inoffensive mucus. Moreover, it prevents us from being misled, as we doubtless often are, by the deceptive character of what we find upon the diaper. The diaper may be covered with discharge, which may be only an overflow, as it may not come from the penthouse in the uterus at all, for there may be odorless discharge on the diaper, and foul, fetid fluid in the uterus. And efficient drainage of the uterus is the key to the successful treatment of puerperal sepsis.—*Medical Record*.

NATURE OF LOWER UTERINE SEGMENT.

Tweedy points out that the cervix is a tissue which does not easily tolerate a stretching force. If the elongated cervix of prolapse were really a process of stretching it would be pulled thin as a piece of twine; instead, it remains of normal thickness, no matter how greatly it is strained. We must then conclude, he says, that the cervix is not a stretchable structure but, on the other hand, that it has a power of extraordinary rapid growth when stimulated by continuous pressure. In a case reported by Jellett a small cervical stump left after the performance of a subtotal hysterectomy was firmly stitched to the aponeurosis of the abdominal wall in an effort to cure prolapse. It remained fixed in this position, but prolapse recurred and it was of so extreme a nature that the os protruded for many inches through the vulva. This enormous elongation was not accompanied by diminution of its diameter, but rather the reverse, and in this instance the increase of the cervix must have amounted to

about fifteen times its original size. Further, the vaginal portion of the cervix when not subjected to pressure does not enlarge.—*Journal of the Amer. Med. Asso.*

IS SYPHILIS HEREDITARY?

E. Kilbourne Tullidge (Detroit Med. Journal): The majority of modern biologists disbelieve in the transmissibility of acquired characteristics in general, which include disease and deformity. Mammalian ova have not been shown to be phagocytic and Gartner has definitely shown that spermatozoa are not. Hohlff and Gartner have calculated the number of spermatozoa in an ejaculation at over 26,000,000. (Note: The editor reported in the New York Medical Journal, June 4, 1910, three counts by hæmocytometer, respectively 346 million, 2,672 million and 286 million.) Owing, possible to missprints, we are unable to follow the mathematic argument as to the probability of true hereditary infection of the ovum, but it is extremely small. Colles' law as to the possibility of non-infection of the mother of a syphilitic child is no longer held to be true. Various experiments are cited as to the possibility of infection through the placenta, hence locating primarily in the liver of the fœtus, according with actual observation. Even if syphilis were hereditary, the mother would also be infected from the fetus.—*Medical Progress.*

Editorial

PUBLISHER'S NOTICE—The Journal is published in monthly numbers of 48 pages at \$1.00 a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money order, draft, or registered letter, should be addressed to the Business manager, C. S. Briggs, M. D. corner Sumner and Union Streets, Nashville, Tenn.

All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

PELLAGRA.

The Pellagra Commission of Nashville, headed by Dr. Jas. W. Jobling, has recently published a very interesting preliminary report upon the epidemiology of pellagra. The work done has been thorough in every detail and shows an immense amount of clerical, as well as field work. It also impresses one very forcibly with the fact that pellagra is constantly on the increase and that this increased incidence is not merely due to better methods of diagnosis, but is actual. So far as the causal relation of insufficient proteins to the disease is concerned, the report shows that apparently there is nothing specific about this. The lowered vitality resulting from poor food simply allows the disease to get a foothold. It also rather explodes the theory that the disease is due to large amounts of colloidal silicates in the food and water and is curable by use of lime salts, since most of the pellagrins considered obtained large amounts of lime salts in their water. There seems to be absolutely no relation between the kind of water used and the disease.

The most important point brought out is the greater incidence of this disease in the unsewered parts of the city and the apparent contagiousness of the disease, since many instances are given to show how several cases would develop shortly after a pellagrin moved into a given locality, espec-

ially if there were open privies and unscreened houses in the neighborhood. Furthermore, certain houses seemed to be the point of origin of the disease in several instances. For the most part the greater number of cases of the disease were found in the outlying districts where there are no sewers, where very few houses are screened and where the privies are filthy and close to the houses. Typhoid fever, which is rather common in Nashville, was found to occur oftener in the same localities where pellegra exists.

As this is only a preliminary report no theories were advanced in regard to the epidemiology. To the reader, however, the impression comes that pellegra will be added to the list of infectious diseases.

The work done by the commission will do much toward educating the laymen in regard to the close relationship between filth and disease, and we hope it will also awaken the public conscience to such an extent that the sewerage system of Nashville will be extended, the open privy abolished and screening of houses made compulsory.

W. T. B.

AMERICAN MEDICAL ASSOCIATION.

The meeting in Detroit, Mich., this month, with an attendance of about 5,000, was full of interest throughout. New York City was selected as the next place of meeting, and the following officers were elected: President, Dr. Charles H. Mayo, Rochester, Minn.; vice presidents, Drs. Llewellyn F. Barker, Baltimore, Md.; John Leaming, Chicago, Ill.; J. H. Carstens, Detroit, Mich., and George F. Keiper, Lafayette, Ind.; secretary and treasurer, Drs. Alex. R. Craig and William A. Pusey, respectively, both of Chicago, and re-elected; chairman of House of Delegates, Dr. Hubert Work, Pueblo, Colo.; vice chairman of the House of Delegates, Dr. Dwight H. Murray, Syracuse, N. Y.; members of Board of Trustees, Drs. A. R. Mitchell, Lincoln, Neb.; E. J. McKnight, Hartford, Conn.; Oscar Dowling, Shreveport, La.; member of

Judicial Council, Dr. H. A. Black, Pueblo, Col.; member of Council on Health and Public Instruction, Dr. Frank Billings, Chicago, Ill.; member of Council on Medical Education, Dr. William D. Haggard, Nashville, Tenn.; member of Council on Scientific Assembly, Dr. J. Shelton Horsley, Richmond, Va.

Among the officers of the various scientific sections, the following doctors from this section were elected: Dr. Ernest C. Levy, Richmond, vice chairman of the Public Health and Preventive Medicine Section, and Dr. W. S. Rankin, Raleigh, N. C., orator for the same section; Dr. H. H. Hazen, Washington, D. C., secretary of the Section on Dermatology. —*Virginia Medical Semi-Monthly*.

AMERICAN EDITORS' ASSOCIATION.

The annual meeting, under the presidency of Dr. Edward C. Register, of Charlotte, N. C., will be held at the McAlpin hotel, New York City, October 25th and 26th.

ENGLAND WARS ON CANCER.

Central Midwives Board Issues New Circular.
Cancer of Breast Curable by Early Treatment.

That the policy of "business as usual" applies to constructive efforts for the prevention of diseases in England is evident from the publication by the Central Midwives Board as recently as March 16, 1916, of a new circular on cancer of the breast. The practice of midwifery in England and Wales is controlled by this board and the circular is the newest of a series issued for the instruction of all women practicing this profession and registered with the board as required by the law. The leaflet on cancer of the breast was prepared by the chairman, Dr. F. H. Champneys, F. R. C. P., and is distributed to the public as well as to midwives.

Pointing out that cancer of the breast, unless treated by early removal, always ends in death, Dr. Champneys states that the disease is at first only in the part affected and not in the system. "Every day and even every minute," the circular says, "is of importance and no time at all should be lost. The earliest symptom is a lump in the breast which is usually painless and may be quite small. It may remain without seeming to grow for some time. The only cure for it is early removal. Although it is often easy to be sure that a lump is cancerous, many lumps which begin by being innocent turn into cancer some times after many years."

Dr. Champneys advises that all lumps except those caused by undoubted and recent inflammation should be removed as soon as they are found and advises all women who discover a lump in the breast to consult at once a surgeon who is in the habit of dealing with them. If the lumps are not removed and are cancerous the disease sooner or later spreads through the body and becomes incurable, while if the lumps are not cancerous they may become so. "The removal of an early lump," the leaflet goes on to say, "is generally simple and if microscopic examination should show afterward that it was not cancerous a danger for the future will have been averted and the anxiety of the patient and her friends will be relieved." From such an operation there is generally "practically painless recovery in a few days. If the lump proves to be cancerous, however, a further operation is necessary, which, if undertaken early saves many lives."

According to Dr. Champneys, if women would follow the above advice much loss of life, many regrets when too late, and much misery would be saved.

DO YOU KNOW THAT

It's worry, not work, which shortens life?

A cold bath every morning is the best complexion remedy?

Poor health is expensive?

The U. S. Public Health Service has reduced malaria 60 per cent in some localities?

The death rate from typhoid fever in the United States has been cut in half since 1900?

Pneumonia kills over 120,000 Americans each year?

Flyless town has few funerals?

The well that drains the cesspool is the cup of death?

UNITED STATES PUBLIC HEALTH SERVICE.

Twenty-five out of every 1,000 employees in American industries, according to recent statistics, are constantly incapacitated by sickness, the average worker losing approximately nine days each year on this account. This "non-effective rate" for the great army of industrial workers in the United States barely suggests the total money loss to employers and employees. The lessened efficiency, the effects of reduced earnings in times of sickness, as well as the cost of medical attention, and the economic loss from deaths, swell the cost to industry and to the nation to almost incalculable figures.

That much of this loss is nothing less than preventable waste and that this waste can be largely reduced by a properly conducted system of governmental health insurance for wageworkers are conclusions set forth in Public Health Bulletin No. 76, containing the results of a study of "Health Insurance—Its Relation to the Public Health," just issued by the United States Public Health Service.

The preventive value of health insurance is given especial emphasis in this study. "Any system of health insurance for the United States or any State should at its inception have prevention of sickness as one of its fundamental purposes," says the bulletin. "This country should profit by the experience of European countries where prevention is being recognized as the central idea necessary to health insurance if health insurance is to attain its greatest success in improving the health and efficiency of the industrial population."

Such a system, it is pointed out in the bulletin, would

1. Provide cash benefits and medical service for all wage-earners in times of sickness at much less cost than is now possible. Adequate medical relief would thus be placed within the reach of even the lowest paid workers who are most subject to ill-health.

2. Distribute the cost among employers, employees, and the public as the groups responsible for disease causing conditions and afford these groups a definite financial incentive for removing these conditions. This can be done by means of small weekly payments from employees, supplemented by appropriate contributions from employers and government at a rate reducible in proportion to the reduction of sickness.

3. Become an effective health measure by linking the co-operative efforts of the three responsible groups with the work of National, State, and local health agencies, and by utilizing these agencies in the administration of the health insurance system.

4. Afford a better basis for the co-operation of the medical profession with public health agencies.

5. Eliminate the elements of paternalism and charity-giving by making employees and the public, as well as employers, joint agents in the control of this fund.

"A governmental system of health insurance," concludes the study, "can be adapted to American conditions, and when adapted will prove to be a health measure of extraordinary value."

Reviews and Book Notices

Sajous's Analytic Cyclopedia of Practical Medicine—By Dr. C. E. de M. Sajous and One Hundred Associate Editors. Seventh Edition of Vol. VII. F. A. Davis Company, Publishers. Philadelphia, 1916.

This volume of over 800 pages attempts to review practically the latest scientific literature on the various subjects of medicine. These reviews are very practical and consist largely of the conclusions of authorities, without editorial comment, simply as the most advanced scientific conclusions up to date.

This volume is equal, if not superior, to the others in many respects. Among the many articles, that on opium condenses in twenty-six pages a complete outline history of opium and its alkaloids and the general uses they are put to, also its physiological action and pathological effects.

Morphinism is included in this, stated in the briefest way; also the facts that are really settled up to the present time, not the theories but the general opinion endorsed by the profession. It is by far the best summary of the facts that has been printed and will be studied with great satisfaction.

One peculiar value of this work is its chemistry and therapeutics of drugs and their action, as well as the latest surgical operations and the facts that are considered settled up to the present time and the evidence on which they are based.

This is more than a textbook and resembles a dictionary in the grouping and studies, particularly of the disputed questions of medicine. This volume deserves the warmest commendation and will be a very great help to all practicing physicians. Write to the publisher for descriptive circular.
—T. D. C.

Publisher's Department

"Robinson's Lime Juice and Pepsin" is an excellent remedy in the gastric derangements particularly prevalent at this season. It is superior as a digestive agent to many other similar goods. (See advertisement in this issue.)

MORE THAN A COINCIDENCE.

It was more than a coincidence that thousands of physicians stated in response to a recent inquiry that one of their most highly prized drugs was cactus. A few doctors might have so reported and the fact be attributed to personal prejudice, but when the same is vouchsafed by thousands of earnest practitioners, it must be believed that their verdict was based on actual observation and clinical experience.

There can be no doubt that Cactina Pillets fill a definite place in the management of cardiac disorders. No claim is made that these are to supersede the more powerful cardiac drugs, when these are properly indicated, but when it is desired to support and sustain the heart and strengthen and regulate its action, Cactina Pillets will not disappoint. Thus a great many physicians have grown to look on Cactina Pillets as one of the safest and most satisfactory cardiac tonics at their command. One to two Cactina Pillets every three or four hours will be found excellent—for example, for relieving the so-called "tobacco heart."

SLEEPLESSNESS.

There can be no denying the fact that for all round use, the bromides still hold first place in the rational treatment of insomnia. Of course, especial care should be used in selecting the particular bromides to be employed, as the re-

sults accomplished obviously depend to a large extent on their purity and quality. This is well shown by the notable therapeutic utility of Peacock's Bromides, a preparation of bromide salts that for many years has been the first remedy turned to by countless discriminating physicians whenever a sedative or hypnotic has been needed. Particularly in overcoming the sleeplessness due to nervous excitation, neurasthenia, alcoholism, prolonged worry, hysteria, and so on, have Peacock's Bromides been found of never failing efficiency, with gratifying freedom from gastric irritation, and the all too evident drawbacks that so often characterize other hypnotic agents.

How much good has been accomplished since the adoption of "first aid" measures, the doctor realizes and often has occasion to admit.

Then, since surgical "first aid" is useful—both to patient and surgeon—why not Anodyne "first aid?" Bearing in mind that the doctor is not called in, as a rule, until the patient has become alarmed at his or her condition, after simple home treatment has failed to relieve, or is at the end of the ability to bear pain or discomfort, is it not better to depend upon Anodyne "first aid" instead of the dose of opiate, narcotic, or "coal tar" taken by the patient on his or her own responsibility?

Anodyne "first aid" refers, for example, to K-Y Analgesic. K-Y Analgesic makes Analgesia attainable by the use of an external application.

Being greaseless and water-soluble, K-Y Analgesic absorbs quickly, differing, therefore, in this important property, from grease or oil (the ordinary ointment or lotion bases).

It penetrates deeply, so that real analgesic effect is added to the property of counter-irritation.

It relieves promptly, and what is most important, its effect is generally prolonged.

Furthermore, being itself incapable of doing harm, K-Y Analgesic can be used at libitum and as often as necessity dictates.

It does not stain skin or soil clothing. It washes off quickly and easily.

For the relief of pain, such as neuralgia, headache, rheumatic, or to relieve soreness, such as in sprains, stiff joints, lumbago, etc., K-Y Analgesic will prove a reliable and useful anodyne "first aid" to keep the patient comfortable between the doctor's visits and to enable him to attain analgesia without having to use agents internally or hypodermically whose action might mark important symptoms or modify them so as to obscure or delay diagnosis.

NASHVILLE JOURNAL — OF — MEDICINE AND SURGERY

CHARLES S. BRIGGS, A.M., M.D., Editor.
W. T. BRIGGS, B.A., M.D., Associate Editor.

VOL. CX.

AUGUST, 1916.

No. 8

Original Communications

THE TWENTY-FIFTH ANNUAL REPORT OF SURGICAL OPERATIONS AT THE BRIGGS PRIVATE SURGICAL INFIRMARY.

Reported by

W. T. BRIGGS, M.D., NASHVILLE, TENN.

(Concluded from July Number.)

Case No. XLVI. Dislocation of the Thumb. W. T. B., æt. 35 years, entered February 2d, having dislocated his right thumb while driving his automobile, in pushing a man aside to prevent him from walking against the machine; desired to have the reduction done with local anæsthesia. A 2 per cent novocaine solution with adrenalin was used guided by the patient's sensibility. Perfect anæsthesia was secured and after a number of efforts, at hyperextension and manipulation the base of the phalanx was released from between the two heads of the flexor brevis pollicis. A spica of adhesive strips was applied and worn for one week.

Case No. XLVIII. Endometritis, Curettage. Mrs. H. S., æt. 23 years, city, entered February 17th. This patient,

when two months pregnant, visited the country and during the visit aborted. A slight metrorrhagia persisted and after her return her physician advised her to come to the Infirmary for relief.

Under A. C. E., after divulsion of the os uteri, the cavity of the uterus was thoroughly curetted and quite a quantity of detritus and granular matter was removed and a gauze drain was inserted. The patient received local treatment on alternate days and at the end of a week went home entirely relieved.

Case No. L. Chronic Appendicitis. Cystic Ovaries. Miss P. S., æt. 36 years, city, entered February 22d. This patient presented quite a chain of nervous symptoms and suffered constantly with pain in the right subcostal region and lower abdominal segment. Examination disclosed a movable kidney, a palpably thickened appendix and both ovaries enlarged and tender. Under A. C. E. a median incision four inches in length was made and the ovaries examined. Both ovaries were found cystic and the cysts were excised, leaving the healthy portions of the ovaries intact. The appendix was delivered and removed with some difficulty, owing to its unusual length and close adhesions. The appendical stump was buried with catgut purse string suture and the parietal wound closed in the usual manner. In addition to the movable kidney there was marked gastrop-tosis, the stomach appearing at the wound. Nothing was done for the kidney displacement, trusting that this condition would be relieved by the general improvement. The patient was dismissed March 16th.

Case No. LII. Pelvic Abscess. Miss L. L., æt. 42 years, Nashville, Tenn., entered February 28th for relief of pelvic abscess. The patient had several chills with high temperature and rapid pulse and suffered extreme pain in the lower part of the abdomen. A decided enlargement could be palpated above the pubes extending to the left side and the mass

was exquisitely sensitive to manipulation. Under A. C. E. anæsthesia a median incision four inches in length was made and a large abscess in the left broad ligament was evacuated, as much as four ounces being withdrawn. The right side was similarly treated, but was less complicated than the left. The pelvic contents were matted together inextricably and it was thought best to place a large drainage tube from the wound through the vagina. This was done and irrigation conducted through the tube, was accomplished daily. Convalescence was tedious but the patient recovered and was dismissed in five weeks.

Case No. LIV. Varicocele. L. D., æt. 24 years, Chattanooga, Tenn., admitted March 2d with large varicocele of the left side with usual symptoms attending that condition. Under local anæsthesia with novocaine infiltration, the veins were exposed by vertical two-inch scrotal incision and the vas deferens carefully isolated from the veins and held aside. The veins were then ligated en masse with No. 2 catgut about one inch and a half apart and the intervening mass of veins excised. The stumps were approximated by tying the proximal and distal ligatures and the cutaneous wound closed with continuous catgut suture. Prompt healing followed and the patient was dismissed on the 10th day.

Case No. LVI. Epithelioma of Lower Lip. W. M. B., æt. 56 years, Memphis, Tenn., admitted March 5th for treatment of epitheliomatous ulcer of the lower lip. The patient was an inveterate pipe smoker and had first noticed an indurated spot on the lower lip at the junction of the middle and outer thirds about one year ago. The part ulcerated and on examination presented a well marked epithelial ulcer with hard, elevated edges, scanty thin discharge and occasional slight hemorrhage. Novocaine infiltration was used and a V-shaped section of the lip by incision on each side of the ulcer was made, removing about one-third of the lip. The wound edges were sutured with silkworm gut sutures and

catgut and prompt healing followed, with very little resulting deformity. The patient was discharged on the 8th day.

Case No. LIX. Strangulated Inguinal Hernia. Herniotomy. J. C., æt. 42 years, city, entered March 11th, at 10 p. m. for relief of strangulated inguinal hernia of left side. The patient had not been able to reduce the hernia for 24 hours and the usual symptoms of strangulation had supervened. The hernia was complete, was of large size and the parts were tender and painful. Under A. C. E. very little effort at taxis was made and the sac was opened by a four-inch incision made in the long axis of the tumor, and the constriction at the neck of the sack was divided. The bowel was found very dark in color but was not gangrenous and was returned into the abdomen. Bassini's operation for radical cure was done, using sutures of kangaroo tendon for the reconstruction of the canal and the cutaneous wound was closed with continuous catgut suture. Recovery ensued without wound accident and the patient was allowed to go home in two weeks.

Case No. LXI. Tuberculous Testicle—Castration. W. W., æt. 36 years, city, entered March 18th for treatment of diseased left testicle of long standing. Evidently the trouble was of tuberculous nature. The testicle was irregularly enlarged to three times its normal size, the surface of the growth was nodulated and presented three fistulous orifices through which was discharged a characteristic thin fluid. The growth was only slightly tender and caused pain only when abscess was developing. Under novocaine anæsthesia by infiltration, and nerve blocking the testicle was removed through elliptical incisions including the fistulous openings, the cord divided between clamps and the vessels ligated separately. The cutaneous wound was closed with continuous catgut sutures. Rapid healing followed and the patient was dismissed ten days after operation.

Case No. LXII. Tonsillectomy. M. T., æt. 16 years, city, entered March 29th. On account of the hypertrophied tonsils and frequent attacks of acute tonsillitis, complete removal of both tonsils was advised. Anæsthesia was induced with A. C. E. and continued with ether. After freeing the tonsil by encircling incision until the forceps lifted it out of its fossa, a wire snare was placed and its attachments were severed. There was some hemorrhage on the right side, but compression with hemostat for a few moments controlled it effectually. A large mass of adenoids was removed at the same sitting. The after treatment consisted of antiseptic mouth wash and liquid diet.

Case No. LXIV. Extreme Phimosis—Circumcision. J. P., æt. 58 years, Alexandria, Tenn., entered April 7th. This patient presented the unusual condition for his time of life of elongation of the prepuce and stenosis of the preputial orifice. Doubtless the hypertrophic elongation was the result of chronic balanitis, which gave him much annoyance. Of late the obstruction to the passage of urine caused a degree of vesical irritation which gave much trouble. After infiltration of the line of incision with novocaine, circumcision was done in the usual manner and close adhesions found between the prepuce and the glans penis. The patient returned home the same day.

Case No. LXVI. Osteoma of Terminal Phalanx of Toe. J. M., æt. 37 years, city, admitted April 17th with tumor of the terminal phalanx of the fourth toe. The condition was of many years standing, but recently had been giving him much trouble by reason of its increased size. Evidently the beginning was a subungual exostosis which gradually involved the entire phalanx. The growth was globular in shape, only slightly tender upon pressure and was hard and bone-like to touch. Under novocaine anæsthesia, amputation of the terminal phalanx was performed, obtaining the

skin covering from the plantar surface of the toe. Healing was excellent and the patient was dismissed in a week.

Case No. LXVIII. Chronic Appendicitis. Miss S. T., æt. 23 years, Springfield, Tenn., admitted April 24th. This patient presented quite a complex set of symptoms, all apparently of reflex origin. There was a slight lateral curvature in the upper dorsal region at which point she complained of almost constant pain. The X-ray failed to show any pathological change. Marked tenderness was present over McBurney's point. Although there had not been any severe attacks, she constantly complained of pain in that region. Under A. C. E. the Battle incision was made, and after breaking up numerous close adhesions, the appendix was delivered and removed. The appendix was folded upon itself into a S-shaped position and held in this position by dense bands. It also contained an enterolith. The appendical stump was buried with catgut purse string suture. The parietal wound was closed as described in preceding cases. The patient made a rather slow recovery and was dismissed May 20th.

Case No. LXX. Carcinoma of the Breast. Mrs. A. W. N., æt. 48 years, Huntsville, Ala., admitted April 28th for treatment of tumor involving the left mammary gland. The patient had noticed a lump in her breast over a year previously but her physician had advised non-interference until it should become painful. The patient was very fleshy and both breasts were correspondingly large. The infiltrated area occupied all the lower segment of the gland. The nipple was markedly retracted. The skin appeared healthy over the swelling but a nodule showed in the skin about $1\frac{1}{2}$ inches from the nipple in a line above. No pain and little tenderness. The gland was freely movable upon underlying parts. No axillary involvement could be detected. Under A. C. E. the breast was removed between elliptical incisions, the upper incision being made to diverge from its course in order to include the cutaneous nodule. The fascia and part

of the pectoralis major muscle was dissected off. The axilla was opened and one gland about the size of a grape was removed. A tubular drain was inserted through the base of the axilla and the very extensive wound closed with silk-worm gut suture, supplemented by Michel's clips. Perfect healing ensued and the patient was dismissed in three weeks.

Case No. LXXI. Suprapubic Cystotomy and Perineal Section for Urethral Stricture. J. F. S., æt. 52 years, Sweetwater, Tenn., entered May 6th. Five years ago this patient was operated on for an impermeable stricture by external urethrotomy and the stricture was relieved to the extent that the largest sounds passed freely and the stream of urine was normal. Subsequently the strictured condition reappeared and the urine was passed in drops. Repeated efforts were made to locate a passage for instruments without success. When admitted the patient's general condition was excellent, the urine, however, was passing in drops. At times he had paroxysms of severe straining with occasional hematuria, suggesting the presence of calculus. This, the X-ray, the only means available, failed to show. Under A. C. E. the bladder was opened through a suprapubic incision and was found enormously distended. Efforts at retrograde catheterization failed. A grooved staff was carried forward through the posterior urethra until stopped by the obstruction. Guided by this a perineal section was made. A sound was then passed through the anterior urethra to the face of the stricture and made to project into the perineal wound, cutting on this as a guide the urethra was opened. A rubber catheter was passed into the bladder guided by a blunt gorget. A second large rubber tube was introduced through the perineal wound extending through the bladder and out of the suprapubic wound which was closed snugly around this tube. On the fourth day the upper tube was shortened and drawn into the bladder allowing the suprapubic wound to close. The perineal portion was removed at the end of a week and the perineal wound healed rapidly. The catheter

was retained in the urethra, being changed every third or fourth day, when large sized steel sounds were passed. The patient was dismissed with instructions to wear the catheter for a long period.

Case No. LXXIII. Acute Appendicitis. Miss E. W., city, æt. 20 years, entered May 8. The patient had been suffering from an attack of acute appendicitis, the pain and tenderness diminishing very slowly. Under A. C. E. anæsthesia a four-inch incision was made in the right linea semilunaris and the appendix delivered without difficulty and was found to be kinked on itself about its centre by firm adventitious bands. The meso-appendix was ligated with catgut and the stump of the appendix buried with purse string suture of catgut. The abdominal wound was closed in the customary manner. The appendix was intensely inflamed and distended with fluid. The patient made an uneventful recovery and was dismissed May 20th.

Case No. LXXIV. Complete Perineorrhaphy. Mrs. G. C. P., æt. 51 years, Henry Co., Tenn., entered May 10. This patient was very fleshy and presented a complete perineal laceration with a well marked rectocele. After a number of days of preparation the operation was done under A. C. E. anæsthesia. The cicatricial tissue was dissected away, exposing the ends of the sphincter muscle and the borders of the levator ani muscle, also exposing the tear in the rectal musculature which permitted the rectocele. The mucous membrane of the two vaginal sulci was carefully freed after the method of Emmett. The rectal tear was closed by a continuous catgut suture. Two wormgut sutures were so placed as to bring the ends of the sphincter together. The crown suture was then placed and the vaginal mucous membrane was closed with catgut. There was considerable hemorrhage from a wound of the bulbar plexus; this seemed to be controlled by the crown suture when tied. Several wormgut sutures were placed through the skin and levator ani

muscles, completing the closure. The method of free dissection seems to be ideal, but the sequel shows one of the dangers of the method. On the fourth day the patient had a severe chill which recurred daily until the patient was thoroughly cinchonised with quinine under the belief that the chills were of malarial origin. The increased respiratory frequency was out of proportion to the temperature and in spite of the free use of quinine and calomel, which gave relief for a time, the fever continued, and on May 29th the patient complained of pain and tenderness over the liver. This was the first symptom referable to the liver, and it is believed there was an hepatic embolus with a possible abscess of the liver. Patient's condition was now precarious and an opportunity to operate for abscess of the liver was not permitted. The patient died June 3d.

Case No. LXXVII. Cavernous Angioma. Z. M., æt. 8 mo., Davidson County, entered May 11th. This girl baby presented a growth over the anterior extremity of the tenth rib of the left side which had steadily increased in size from birth. It was nearly as large as a hen egg, dark purple in color, and tortuous vessels showed beneath the skin around it. Under chloroform the growth was encircled by curved incisions, placed beyond the tortuous vessels. The growth was found to involve the skin and superficial fascia, and its removal occasioned only slight hemorrhage. The wound was closed with catgut and supported with adhesive strips. The wound healed promptly and the patient was dismissed May 15th.

Case No. LXXIX. Fecal Fistula. Miss J. R., Haglersville, Tenn., entered May 16th. This case was mentioned in the first part of this report. Sufficient time having elapsed for spontaneous healing of the fistula, the patient returned for operative treatment. A number of days were spent in preparatory treatment, emptying the bowels thoroughly and measures used for the relief of the excoriation of the skin

surrounding the fistula due to the copious discharge from the opening. With A. C. E. anæsthesia two curvilinear incisions were made inclosing the fistula. These were carried through the abdominal wall, opening the peritoneum to the mesial side of the fistula. Extensive adhesions were broken up to the outer side of the fistulous tract, which was followed to the cecum and its attachments here excised by elliptical incisions enclosing the fistula. The opening in the bowel was about half an inch below the base of the appendix which had been simply ligated in the primary operation. In closing the opening a continuous suture of linen was used. A second line of No. 0 catgut was placed, re-enforcing the deeper linen sutures. The abdominal wound was closed in the usual manner and healing was satisfactory. The patient was dismissed in four weeks with perfect result.

Case No. LXXXI. Multilocular Ovarian Cyst. Mrs. A. W. W., æt. 52 years, Alexandria, Tenn., entered June 19th. This patient presented an enlargement as large as the uterus at full term. The swelling was dull on percussion with resonance in the flanks. Fluctuation was fairly well marked and the outline of the tumor was somewhat irregular. The history of the case showed that the growth began in the left side and the recent growth of the tumor upward seemed to embarrass the diaphragm more than usual for the size of the tumor. The digestive apparatus was also very much disturbed. Under A. C. E. a five-inch incision was made in the linea alba exposing the tumor which was steadied by the hands of an assistant and a Spencer-Wells trocar was introduced draining the fluid from the largest locule. The upper part of the tumor seemed to be of solid material and extended upward behind the transverse colon and stomach. Efforts to bring down the mass by traction gave the impression that there were adhesions, and in order to admit the hand the incision was extended above the umbilicus. In introducing the hand, air entered and the mass was then easily delivered. It was found to be composed of a large number

of small thick walled cysts filled with colloid material. The left border of the pedicle was continuous with the mesentery of the sigmoid; this was carefully separated and pedicle was secured with silk braid and the cyst removed. The wound was closed in the usual manner. Aside from slight nausea from the anæsthetic the patient made a remarkable recovery and was dismissed July 3d.

Case No. LXXXIII. Chronic Appendicitis. E. H. R., æt. 42 years, city, entered June 21st, This patient was recovering from an attack the first in a year. The attacks were peculiar in that the abdominal pain was quickly followed by purging and intractable vomiting. The tenderness was very slight, but the thickened appendix could be felt through the thin abdominal wall. Under chloroform and ether the Battle incision was made and the small indurated appendix was removed and the wound was closed in the usual manner. The nausea with vomiting following the operation was severe, lasting a week. The patient was able to lie on his left side soon after the operation, a thing he had not been able to do for several years. Dismissed July 1st.

Case No. LXXXV. Ventrofixation for Procidencia. Mrs. S. M., æt. 54 years, Alexandria, Tenn., entered June 24th. This patient had suffered for a number of years from the usual group of symptoms commonly known as female troubles, frequent irregular menstruation, tenderness over the lower segment of the abdomen, and the descent of the uterus to the vaginal outlet when standing. Examination disclosed a hyperplastic uterus with marked metritis with a slight laceration of the cervix and also of the perineum. A very large muco-cutaneous hemorrhoid presented at the posterior verge of the anus. Under A. C. E. the cavity of the uterus was thoroughly curetted, removing a quantity of granular detritus. The hemorrhoid was excised and the wound was closed with catgut. The abdomen was then opened through the linea alba, and after scrutinizing the adnexa, which

were found normal, the uterus was suspended by two 20-day chromic catgut sutures. The wound was closed in the usual manner. The patient made an uninterrupted recovery and was dismissed July 22d.

Case No. LXXXVII. Femoral Adenoma. J. S., æt. 27 years, city, entered June 27th. This patient had experienced a case of gonorrhea in January. The left testicle became swollen and the discharge ceased. Under treatment the epididymitis subsided without a return of the discharge, and he remained well until late in May, when he presented an enlargement of the glands about the saphenous opening of the left side. This increased rapidly, but showed no tendency to suppurate. The removal of the entire mass was attempted under local anæsthesia, using a 1 per cent cocaine solution with adrenalin. The anæsthesia was satisfactory until the last stages of the enucleation, when traction was necessary. A few whiffs of chloroform were given in order to complete the enucleation. The wound was closed with catgut and the patient was able to leave July 10th. The patient was also suffering from an ingrown nail on the left foot, and on account of the location of the glands involved, the infection was attributed to this source rather than to the old gonorrhea.

Case No. LXXXIX. Fascial Sarcoma of Thigh. D. K., æt. 62 years, city, entered July 3d. This was a recurrence of the growth removed November 30th, and appeared in the lower angle of the cicatrix, and was nearly as large as a goose egg, its long diameter being placed transversely. Novocaine not being procurable a 1 per cent cocaine solution with adrenalin was used. As the enucleation proceeded the fascia was freely removed with the growth. The wound was closed with catgut, and the usual dressing was applied. The wound, though extensive, healed quickly and the patient was going about in ten days.

Case No. XCI. Abscess of the Gland of Bartholin. Mrs. W. M. B., æt. 27 years, city, entered July 6th. The patient sought relief from the intense suffering characteristic of this affection, although being a Christian Scientist she had tried to believe there was no pain. She had suffered similarly before becoming a Christian Scientist and possibly the memory of it weakened her faith. The part was anæsthetised with a weak solution of cocaine and adrenalin and a free incision was made evacuating about a tablespoonful of pus. A gauze drain was introduced and an appropriate dressing was applied.

Case No. XCII. Appendectomy and Salpingectomy. Mrs. R. P. M., æt. 41 years, Culleoka, Tenn., entered July 6th. This patient had been in delicate health for several years and had suffered repeated attacks of abdominal pain, varying in its location and followed by great pelvic tenderness. Examination disclosed a great deal of induration around the uterus which was immovable. The thickened appendix could be readily felt. Under ether anesthesia the abdomen was opened in the middle line. The left tube was concealed by a mass of thin walled cysts that ruptured easily, leaving a mass the size of a goose egg formed by the distended Fallopian tube. This mass was enucleated and the ovarian artery was secured with catgut. The right tube and ovary were found matted by adhesions into a mass. These were removed, and after breaking up numerous adhesions about the appendix, this was delivered and removed. The wound was closed in the usual manner. Considering the severity of the operation the patient recovered remarkably and was dismissed July 24th.

Case No. XCIV. Curettage for Metrorrhagia. Mrs. T. P., æt. 39 years, Allens Creek, Tenn., entered July 8th for relief of metrorrhagia dating back to March, 1915. This patient had been operated five years ago for extensive laceration of the cervix, amputation of the cervix having been

performed. She had an incomplete abortion in March and more or less constant uterine hemorrhage ever since, the discharges being without pain and free from odor and with very little constitutional disturbance. Under local anæsthesia with cocaine, the cervix was freely dilated and the uterine cavity thoroughly curetted with sharp and dull curettes, removing a large quantity of what appeared to be placental tissue. Iodine application was made and the cavity of the womb packed with gauze. After several similar treatments on alternate days the hemorrhage ceased and the patient was dismissed in two weeks.

Case No. XCVII. Complete Fistula in Ano. C. M. B., æt. 33 years, Chattanooga, Tenn., entered July 12th suffering from fistula in ano of several years standing. The cutaneous orifice situated about three-quarters of an inch from the anal verge postero-laterally, admitted the probe to pass readily into the rectum. At times this orifice would close, causing a good deal of pain until it was reopened. Under cocaine anæsthesia, the sinus was incised upon a grooved director, the roof of the canal incised after the method of Salmon and the fistulous tract thoroughly curetted. The wound was swabbed with balsam Peru and packed with gauze. The wound filled up rapidly and the patient was discharged in ten days.

Selected Articles

THE CAUSES AND TREATMENT OF STERILITY IN WOMEN.

BY ALFRED HEINEBERG, M.E.,

Associate in Gynecology in Jefferson Medical College, Obstetrician to
the Jewish Maternity Hospital, and Assistant Gynecologist St.
Agnes and Mt. Sinai Hospitals, Philadelphia, Pa.

Sterility in the female is defined as inability to bring forth children, but for our purpose is understood to be inability on the part of a married couple to bring about conception; for there are many instances in which conception repeatedly occurs but the resultant pregnancies never mature, and sterility exists in spite of conception. Various types of sterility are recognized, viz.: (1) primary, (2) relative, and (3) secondary.

Primary sterility is that type in which the possibility of conception is precluded because of permanent congenital or developmental defects in the structure or function of the genital organs.

Relative sterility is a state in which the absence of conception is attributable to causes which are susceptible of correction. These causes, as we shall see, may be structural, chemical, functional, or emotional. It includes also those instances of so-called sexual incompatibility, in which a man and woman may live together in sterile marriage for many years, and each, after divorce or separation, subsequently enter into fruitful marriage with another person.

Secondary sterility, or what is commonly known as "one-child sterility," occurs in those women who fail to conceive after the birth of one child. It embraces only those in whom pregnancy is desired, but is prevented by structural changes

which occur in the genital organs through puerperal infections or other complications of labor. It does not include those cases in which measures are adopted to prevent subsequent conception.

ETIOLOGY.

The causes of sterility in the female are to be sought in the husband as well as in the wife. This is a fact which can not be too thoroughly impressed nor too well remembered. The physician who subjects a woman to an operation, no matter how slight, for the sole purpose of correcting sterility before he has carefully investigated the seminal fluid of her husband is guilty of a grave injustice to his patient. It is to be constantly borne in mind that in at least 30 per cent of the sterile marriages the fault is to be found in the husband. In the examination of 129 cases of sterility Huhner¹ fixes the responsibility of the man at 59 per cent. Reynolds² states as his belief that in nearly 50 per cent of sterile marriages the fault is to be found in the husband. In my own experience about 40 per cent of the husbands have been found to be sterile. I would like to emphasize that the statement of the wife as to the virility of her husband must not be accepted as *prima facie* evidence of his procreative ability. It must be remembered that copulative efficiency bears no definite relation to procreative power. The causes of sterility in the female may be classified as follows:

1. Structural or physical.
 2. Biochemical.
 3. Functional.
- Emotional or psychic.

The causes which are operative in a given case are frequently difficult to determine. In only a few cases can the sterility be attributed to a single, easily determined factor. In the majority of cases several factors are responsible, and can be discovered only after a thorough investigation. In the primary or absolute type of sterility the etiologic factors are usually easily detected, and consist of such permanent defects in structure as absent vagina or uterus, or the per-

sistence of the infantile type of uterus. The underlying causes of secondary or one-child sterility consists usually in well-recognized changes in the structure, position, or secretions of the genital organs which result from infection or injury incident to labor. These two types of sterility, however, constitute but a comparatively small proportion of the cases. By far the largest number belong to the relative type, in which the underlying causes are frequently complicated or obscure and are discovered only after a most diligent and painstaking search. Even when studied most carefully these cases are often the source of keen disappointment and make us realize the limitation of our knowledge of the causes and treatment of sterility in the female. We shall consider each class of causes separately without attempting to demonstrate the relationship of one to another, for such an attempt would necessitate the study of innumerable combinations and would serve no definite purpose. It is far better to have a thorough knowledge of the factors which may be considered to be operative in a given case.

The *structural* causes of sterility to be found in the genital organs are best studied from without inward. They comprise those conditions which either prevent the sexual act, render it imperfect, or impede the passage of the spermatozoon toward the ovum. They may be divided into two groups—(1) congenital or developmental, and (2) acquired. To the first group belong such anatomical changes as are present at birth or result from faulty postnatal development, such as imperforate hymen, absent vagina or uterus, atresia of the vagina, infantile uterus, imperforate cervix, stenosis of the Fallopian tube, etc. It is only necessary to name most of these without further comment, for their recognition is not usually difficult. A tough unruptured hymen with a small perforation, while it may prevent coition, forms no absolute bar to conception because it does not impede the advance toward the ovum of highly motile spermatozoa which may be deposited on the surface of the vulva. This same statement applies as well to stenosis of the vagina.

Flexions of the uterus, especially acute antelexion, are frequently associated with a long, conical cervix having a narrowed canal, and a pinhole os.

This combination is often cited as a cause of sterility. The factors in this combination which may be the cause of sterility are either developmental, physical, or bio-chemical. Uteri presenting these conditions are frequently found to be small and undeveloped. It would seem better to regard many of them as hypoplastic and associated with ovaries which are also hypoplastic, and unable to produce healthy, fertile ova. The physical hindrances to conception are claimed to be the forward direction of the cervix against the anterior vaginal wall and the stenosis of the cervical canal. Huhner maintains that conception is not likely to occur unless the semen is deposited upon the cervix near the external os, and that such deposition is difficult if the cervix has a marked anterior direction.

As to stenosis of the cervical canal it seems improbable that any narrowing of the cervical canal which is not of sufficient degree to completely obstruct the flow of menstrual fluid could, in itself, impede the progress of such a small, motile organism as the spermatozoon. The baneful influences of stenosis of the cervix are more likely to be found in biochemical changes in the cervical secretion due to faulty drainage, and these will be discussed below.

The acquired structural changes usually result from inflammatory processes or the presence of neoplasms which either occlude some part of the genital canal, or render the uterine mucous membrane unfit to retain or support the fertilized ovum. Infections of the genital organs in the female will account for a fairly large percentage of sterile marriages. Structural alterations in the uterus, tubes, ovaries, or pelvic peritoneum are to be found in most women who have been infected with the gonococcus. A chronically diseased endometrium, partly because of cellular change and partly from its toxic secretion, may either arrest the pas-

sage of the spermatozoon or present an unsuitable bed for the fertilized ovum.

The changes produced in the Fallopian tube by gonorrheal, tuberculosis, or other infection which is inimical to the union of the spermatozoon and ovum, are either occlusion of one or both ends of the tube or loss of the ciliated epithelium of the tubal mucosa. Sterility due to tubal atresia is not as a rule difficult to determine, because a tube thus occluded is usually distended, tender, and prolapsed into Douglas's cul-de-sac, where it may be easily palpated. If it be true that the passage of the ovum along the tubal canal is due to the activity of the ciliated epithelium and that impregnation occurs within the tube, we can readily appreciate that the loss of the cilia might prevent conception through failure in the conveyance of the ovum to a spot favorable for its union with the spermatozoon. Loss of cilia, even if accepted as a cause of sterility, can only be surmised for it may not be demonstrated by any known method of examination before the tube is excised and subjected to histologic study.

Physical changes in the ovary which may be the cause of sterility are either those which destroy the germinating epithelium or present the rupture of the matured Graafian follicle. An ovary subjected to chronic pelvic congestion from any cause usually develops hyperplastic tunica albuginea which is tough and resistant. As a result, the successively matured Graafian follicles fail to rupture and appear as small retention cysts beneath the surface of the ovary. Such an ovary is found to be enlarged, tender, prolapsed, and freely movable. Organized fibrinous exudate upon the surface of the ovary or adhesion of the ovary to the surrounding viscera resulting from pelvic peritonitis will either prevent the discharge of the ovum or hinder its transit from the ovary to the tube. Even in the absence of such changes in the ovary, pelvic peritonitis and its consequent adhesions may be the cause of sterility by occluding the fimbriated extremity of the tube. The rest of the tube

may not share in the inflammatory process. The starting-point of such a pelvic peritonitis may be disease of the appendix or other abdominal viscus. The previous history of the patient, in such a case, would shed much light upon the probable cause. This is especially so in "one-child sterility," in which the pelvic changes enumerated may have their origin in puerperal infection.

BIOCHEMICAL CAUSES OF STERILITY.

A most interesting phase of the subject of sterility in the female, and one which promises to shed much light upon its etiology and treatment, is that afforded by the biochemical researches of Huhner, Reynolds, and Lespinasse.³ Huhner and Reynolds have studied the effect upon spermatozoa of the normal and pathological secretions of different parts of the female genital tract and have presented some very interesting data. The Huhner test consists in the examination of secretions from the vagina, cervix, and cavity of the uterus, beginning preferably within one-half and not later than one hour after coition, and continuing at intervals during the following twenty-four hours. First the mixture of semen and vaginal mucus is examined. In normal cases the spermatozoa remain active in the vaginal mucus for about one hour. When they have lost their motility in the vaginal secretions the cervical mucus is examined, and under normal circumstances should contain active spermatozoa one hour after coition. At the expiration of three or four hours more the secretion from the uterine cavity is withdrawn with a specially devised syringe, and when normal it should disclose the presence of a few actively motile spermatozoa. When active spermatozoa are found in the uterine secretion several hours after they have disappeared from the servical mucus the test is said to be positive. Through the careful application of this test we may determine in which part of the genital canal the activity of the spermatozoa is too rapidly arrested. Acting upon the information thus obtained our search for the cause of the arrested motility and conse-

quent sterility is more likely to be successful than by the haphazard methods heretofore employed.

If at the first examination of the mixture of semen and vaginal secretion no spermatozoa are found, the man is considered to be aspermatic; if many dead or feebly active spermatozoa are present their devitalization is to be sought in the reaction of the vaginal secretion. If spermatozoa reach the cervix in an active state and lose their motility in the cervical mucus, either the secretion of the cervix itself or that draining from the uterus is toxic. If they successfully pass through the vaginal and cervical canals but suffer arrest of motility in the cavity of the uterus, either the uterine or tubal secretions may contain the toxic agents. If repeated examinations of the uterine cavity disclose actively motile spermatozoa several hours after coition, the inference must be that the sterility (in the absence of organic lesions of the tubes and ovaries) is to be ascribed to deficient quality of ova.

Some of the alterations in the secretions which render them toxic to the spermatozoa are stated to be as follows: hyperacidity of the vaginal secretion; hypersecretion, inspissation, or infection of the cervical mucus and the presence in it of pus cells or pathogenic bacteria; the admixture of desquamated epithelium with or without bacteria in a thin, overabundant uterine secretion. The causes of such alterations are gonorrheal or other infections, deficient drainage from the cervical canal due to a pinhole size os, catarrhal changes in the cervical or uterine mucosa. The recognition of the cause is important if the proper treatment for correcting the sterility is to be instituted.

It has been proposed by Lespinasse to carry the biochemistry of sterility still further and to establish it upon a serologic basis. He explains the reason for this attempt as follows:

"It has been shown experimentally that spermatozoa, after coitus, penetrate into the abdominal cavity in large numbers. From here they are absorbed by the leucocytes, pro-

ducing lytic bodies in the serum of the woman for spermatozoa and consequently rendering her sterile.

"It is also possible, but as yet unproven experimentally, that the secretions of certain women are normally agglutinative and hence destructive to the spermatozoa of one individual and not to another, thus accounting for those cases of sterility where both individuals have children by subsequent marriages. A recent test for paternity has been based on this formation of antibodies to spermatozoa. By it for medico-legal or other purposes the father of any particular babe may be determined. The test depends upon the fact that the mother and babe are sensitized to the sera or sperm of the male individual who produced the pregnancy."

FUNCTIONAL CAUSES OF STERILITY.

The perversions of function to which sterility may be ascribed consist of some not well understood processes, among which are changes in quantity or quality of the internal secretion of the ovary, disturbances in the inter-relation of the suprarenal thyroid and ovarian secretions. Such perversions or disturbances are considered to be present in those women who rapidly become fat and suffer amenorrhea. On this hypothesis may be explained the association of fat and sterility. Out of 215 cases of obesity, Kish⁴ found 21 per cent sterile, and his observation coincides with that of other investigators.

Corpus luteum deficiency may exist without either amenorrhea or obesity and still be the cause of sterility.

PSYCHIC CAUSES OF STERILITY.

The relation of the sexual appetite and sexual pleasure in the sterile must be carefully considered as a whole, and especially in accounting for what is termed incompatibility as a cause of sterility.

While the evidence in favor of attributing sterility to absence of sexual emotion in women is not conclusive, there are some observations which would indicate that sexual

pleasure and orgasm are powerful factors in aiding conception. In 69 cases of sterility by Kish he found faulty development of voluptuousness in 38 per cent. Duncan⁵ found the same condition in 31 per cent of his cases. Eulenberg⁶ along with other students of this subject holds that while conception may occur if the woman is entirely passive, nevertheless active participation on the woman's part due to excitement is necessary to produce those reflex processes which render easy the passage of the spermatozoa into the uterus.

Of the reflex processes which may be assumed to accompany the orgasm, Vaertung⁷ writes as follows:

"If one considers the sexual apparatus one sees that each and every part of it is concerned with aiding fertilization. While the whole process is not clear we may safely assume the following process to accompany orgasm: There is a peristaltic contraction of the vagina which holds the mass of semen against the mouth of the uterus. In these peristaltic contractions not only the vagina, the cervix, and the lower part of the uterus but also the entire uterus is apparently involved. The uterus during strong excitement, and assisted by the abdominal pressure, rises further into the pelvis, the mouth of the womb sinks lower, is opened by the uterine muscles, and ejaculates a small amount of secretion from the cervix. At the same time a sucking action is induced in the slightly opened mouth of the uterus which results in the introduction of some semen into the uterus. Rohleder⁸ is of the opinion that this aspiration is the more powerful the greater the sexual excitement. In addition to this assistance must be added the action of the ciliated epithelium of the cervical canal. Summarizing the chief results of the voluptuous sensations we may note that they cause: (1) The contractions of the vagina; (2) reflex uterine activity with the corresponding aspirating action; (3) the mucous plug; (4) the activity of the ciliated epithelium; (5) an increased temperature of the entire genital apparatus."

TREATMENT.

The successful treatment of sterility in the female depends largely upon the recognition of its causative factors. Any case that seeks relief requires to be studied with infinite care in order to determine the cause or combination of causes which may be operative. Cognizance of the many complicated and baffling causes of sterility should make us hesitate to undertake its correction with the same nonchalance which has characterized most of our previous efforts in that direction.

An imperforate hymen, or one which though perforate is so tough and resistant as to prevent satisfactory sexual congress, should be either freely incised or excised. A stenosed vagina should be overdilated under general anesthesia, either with the fingers or instrumental dilators. Subsequent contraction should be prevented by insertion of a large glass vaginal plug which should be retained for several weeks. A transverse partition forming an obstruction in the upper part of the vagina should be completely excised; the raw surfaces of the vaginal walls thus produced should be sutured to prevent the formation of adhesions and the possibility of a secondary atresia. The treatment of absent vagina with the object of correcting sterility will depend upon the condition of the uterus, tubes, and ovaries, and this is frequently difficult to determine except by direct inspection through abdominal incision. The construction of a vagina in these cases may be attempted if the other pelvic organs have been ascertained to be of normal size and structure. Sterility due to the persistence of an infantile uterus can not be corrected.

For the purpose of overcoming sterility, the treatment of acute ante flexion of the uterus associated with a cervix which is long, stenosed, and directed anteriorly should be undertaken only after careful consideration of the factors which are amenable to correction. Success will not result from any treatment of a small, hypoplastic uterus. Dilatation and curettement of the stenosed cervix are done for the

purpose of widening the canal, securing good drainage, correcting the toxicity of the discharge, and producing a healthy cervical mucous membrane; all of these things may be accomplished, and yet dilatation and curettement, according to Kelly⁹, succeeds in overcoming sterility in less than fifteen per cent of the cases in which it is done. What is the reason for such a large percentage of failures? In over thirty per cent of the cases the husband is aspermatic. In a fairly large percentage the uterus and other genital organs are hypoplastic and unfitted for conception. In some cases the cervical canal soon contracts again. In few, if any, cases do dilatation and curettement sufficiently overcome the angulation of the uterus and draw the cervix backward so that it may be bathed in the pool of semen which is deposited in the posterior vaginal fornix. In order to accomplish this, some additional operation, such as that of Dudley¹⁰ for correcting the angulation, should be done.

If occlusion of the Fallopian tube is found to be the only barrier to the union of the spermatozoon and ovum, an attempt should be made to restore the continuity of the genital canal by operation upon the tube. The scope of this paper, however, will not permit of a detailed description of the many operative procedures which have been devised for the purpose. Salpingostomy with or without removal of a portion of the tube may suffice. Complete removal of diseased tubes without special attempt at securing a patulous genital canal has been followed by pregnancy. A woman, reported by Polak¹¹, who had been sterile for many years because of gonorrheal salpingitis which developed soon after marriage, became pregnant shortly after a bilateral salpingectomy. I have recently reported two cases of pregnancy following bilateral salpingectomy, and have collected thirteen similar cases from the literature. In the surgical treatment of sterility caused by cystic degeneration of the ovary or inflammatory disease (other than abscess formation) in or around the ovary, the attempt should be made to preserve some of

the ovarian tissue and attach it near the abdominal ostium of the tube.

Correction of the chemical and biological changes in the female genital secretions which are inimical to the health and life of the spermatozoa may be attempted by the following methods. Hyperacidity of the vaginal secretion may be neutralized by douches of alkalies, as sodium bicarbonate or sodium phosphate (Huhner), used just before coition; or by the introduction of suppositories of alkaline substances several hours before. The same treatment has been effective in the comparatively few instances in which the cervical mucus was found to have an acid reaction. Chronic purulent or mucopurulent cervical discharges which are found to quickly destroy the mobility of the spermatozoa may be rendered less toxic by proper treatment. In the absence of laceration of the cervix and its sequelæ, such as hypertrophy and erosion, medical treatment will usually suffice to restore the cervical mucous membrane to a normally functioning state. This treatment may be pursued along well-recognized lines. In my own experience the best results have followed applications of compound solution of iodine to the cervical mucous membrane and packing the vaginal vault and cervical canal with an ointment consisting of ichthyol one part, wool-fat three parts, using one-quarter to one-half ounce at each application. This has yielded much better results than tampons or suppositories containing various medicaments in a glycerin base.

Only after a thorough trial of various methods should curettage be resorted to. All forms of medical treatment fail however, in correcting the endocervicitis and its toxic discharges when hypertrophy, eversion, and erosion of the cervix exist. These conditions demand appropriate surgical treatment, usually amputation of the cervix. A method of cervical amputation which I¹² have described and have employed in most instances has given me better results than the methods previously used. In those cases in which there is an associated obesity and amenorrhea, and in which the

sterility appears to be due to lack of ovarian secretion, or to some disturbance in the relationship of the thyroid and ovarian secretions, satisfactory results are sometimes produced by the administration of dried corpus luteum substances (2 grains) combined with desiccated thyroid gland ($\frac{1}{4}$ to 2 grains) three times a day. A rigid dietary and regulated exercises should be instituted. The lessons to be learned from a review of this subject would seem to be:

1. Sterility in the female may be due to many causes, some apparent and easily determined, others obscure and discovered only after careful investigation.

2. Surgical treatment for its correction should not be instituted until an honest and thorough investigation has shown that the sterility may reasonably be attributed to structural changes in the female generative organ.

3. No investigation can be considered complete which does not in some way include examination of the semen.—*The Therapeutic Gazette.*

BIBLIOGRAPHY.

¹ Hühner: Sterility in the Male and Female and its Treatment. (Rebman Co., New York.)

² Reynolds: *Am. Jour. Med. Sci.*, 1907, August; *Surg. Gyn. and Obs.*, 1911, p. 17; *Journal A. M. A.*, 1913, lx, p. 93; *Journal A. M. A.*, 1913, lxi, p. 1363; *Journal A. M. A.*, 1915, lxxv, p. 1151.

³ Lespinasse: Experimental and Clinical Work on Sterility. *Illinois Med. Jour.*, April, 1915, p. 296.

⁴ Kish: Die Sterilität des Weibes.

⁵ Duncan, M.: Sterility in Women.

⁶ Eulenberg: Sexuale Neuropathic.

⁷ Vaertung: *Zeitschr. Sexualwissenschaft*, 1915, ii, p. 185.

⁸ Rohleder: Die Zeugung beim Menchen, S. 122.

⁹ Kelly, H.: *Medical Gynecology* (Appleton).

¹⁰ Dudley, E. C.: *Amer. Jour. Obs.*, 1891, vol. xxiv, No. 2.

¹¹ Polak: *Amer. Jour. of Obs.*, 1910, p. 676.

¹² Heineberg: *Amer. Jour. Obs.*, 1915, vol. lxxi, No. 5.

Extracts from Home and Foreign Journals

SURGICAL

OPERATIVE TREATMENT OF RUPTURE OF THE LIVER.

Bull's patient was a girl of twelve and the bleeding was severe. She seemed to be doing well after the prompt laparotomy and suture of the liver, but the fifth day symptoms of peritonitis became evident requiring further intervention. Bile oozing from the suture was responsible for the peritonitis and also for an effusion in the pleura. Recovery was complete in two months. In Thole's compilation of 752 cases of injury of the liver given surgical treatment, the mortality was 39.5 per cent of those in which the interval before the operation was less than six hours. It rose to 86.3 per cent with an interval of twenty-four hours or longer. In the 188 cases with simple rupture—like the case reported—the mortality was 55.85 per cent and in over three-fourths of those the bleeding was the direct cause of death. Bull thinks that in his case the girl's life was saved by the two liters of saline infused into the saphena before and during the operation.

—*The Journal of the American Medical Association.*

TREATMENT OF SEPTIC WOUNDS, WITH SPECIAL REFERENCE TO THE USE OF SALICYLIC ACID.

Louisa Garrett Anderson, Helen Chambers, and Margaret Lacey have made observations on approximately 1000 cases of septic wounds treated in the wards and operation theaters of the Military Hospital, Endell Street, making large numbers of cultures to determine the bacterial growth in the wounds. From these observations they draw the following conclusions: 1. The bactericidal action of many of the so-called antiseptics when applied to septic wounds is negligible.

2. The majority of wounds heal without the application of an antiseptic, provided free drainage is supplied and dressings are changed frequently. Hypertonic saline, in so far as it aids physiological processes, is preferable to many so-called antiseptics. 3. A strong antiseptic, such as eusol, can sterilize the surface of a wound with which it comes in contact, and, if applied continuously, gives excellent results. 4. Salicylic acid applied in a suitable form can often save cases when other methods have failed. It is particularly useful when dressings can not be repeated at frequent intervals. 5. In all cases when recovery is delayed and the effect of the reagents of doubtful value the treatment should be controlled by making repeated cultures from the wound surfaces.

—*Medical Record.*

CHOLECYSTOSTOMY VS. CHOLECYSTECTOMY.

F. B. Lund refers to the lack of agreement among men of experience and skill as to the indications for cholecystectomy. He reviews the recognized advantages of cholecystostomy upon which surgeons are very well agreed, and believes that cholecystectomy is indicated in the following cases: 1. In cases of very thick, acutely inflamed, bright-red, or gangrenous gall-bladders due to impaction of a stone in the cystic duct. 2. In cases of chemically thickened gall bladders. Here the thickened walls can not contract and drive out the bile, so that what bile gets back into the gall bladder is sure to stagnate there; after cholecystostomy, the walls do not contract, so that we get a mucous sinus for a long time or forever. 3. In cases of gall bladders very much distended with clear fluid from impaction of a stone in the cystic duct. 4. Whenever suspicion exists of malignant disease. 5. In chronic cholecystitis without stones, but with moderate thickening and ulceration of the mucous membrane, giving little yellow spots on the mucous surfaces, the so-called "strawberry gall bladder." These do not get well without drainage. 6. In chronic cholecystitis without stones,

but with adhesions to the surrounding organs, especially the pylorus, which cripple the latter and cause symptoms. Here, also, drainage is only temporarily efficient. The gall-bladders is a constant focus for low-grade infections and adhesions, which will continue to form and perhaps to spread until its removal, all these processes being attended with discomfort and invalidism to the possessor of the organ.—*Medical Record*.

MEDICAL

A NEW PASTE FOR SKIN AFFECTIONS.

Unna uses and recommends a substitute for starch as a dusting powder in the treatment of eczema, sunburn, and other skin disorders, cooling pastes containing calcium or magnesium carbonate. By mixing 30 c. c. each of linseed oil and lime water and then incorporating about 20 grams each of zinc oxide and calcium carbonate a satisfactory paste will result. This combines the cooling and drying properties of starch with the action of a dilute alkali which has proved useful in eczema, burns, erysipelatoid affections and other marked inflammations of the skin. In cases with foul secretions the paste may be made antiseptic by using calcium chloride instead of the carbonate. If pastes other than the above are desired, the following mixtures will be found preferable to starch: Terra silicea 5 grams, zinc oxide, 25 grams, oil of arachis (peanut oil), 10 grams, and lard 60 grams; or one may reduce the zinc oxide in the above to 15 grams and adding 10 grams of precipitated sulphur. These are both hygroscopic.—*The Medical Brief*.

ANTHRAX DUE TO SHAVING BRUSH.

The Hospital mentions the case of a man who died in the West London Hospital last summer after an illness of 2½ days of cellulitis of the neck determined post mortem to be

anthrax. He had just begun using a new shaving brush which, fortunately, had not been washed subsequently. Anthrax bacilli were found in this brush and also in 4 out of 5 new brushes of the same batch. (Note: While rinsing with hot tap water at approximately 70 degrees C. kills, inhibits or mechanically removes most germs, bacteria or others, liable to be present or to be conveyed to brushes, it is a wise plan to soak for an hour or so a new tooth, nail or shaving brush in strong bichlorid solution after preliminary washing and before putting the brush into commission. — *Buffalo Medical Journal*.

AMMONIA AS AN ENEMA.

In the *Lancet* of February 12, 1916, Black writes as follows:

"May I draw your readers' attention to the effectiveness of an ammonia enema in the treatment of post-operative ileus and intestinal paresis? This sequela of an abdominal operation all have found to be most distressing to the patient, while it is exasperating to the surgeon, and in extreme cases even dangerous to the patient's life. I understand that at the front it has proved frequently a fatal complication of operations for abdominal wounds.

"The prescription is liq. ammon. fort. 1 dr., water one pint, administered as an enema; its effect is greatly enhanced by a hypodermic of pituitary extract 1 cc. half an hour previously. This treatment is sure to result in a good motion and discharge of excessive flatus, and again and again I have found it to act where the ordinary enemata, turpentine, eserine, etc., had failed. Two words of warning I would give—namely, that if used frequently, or if used in greater strength than I suggest, injury to the rectal mucous membrane is liable to take place. On two occasions the daily administration of the enema for three consecutive days resulted in a certain amount of rectal hemorrhage. On another occasion the mistake of a nurse in putting in too much

ammonia gave the patient a very painful septic colitis lasting for a week.

"My excuse in writing about this is that although I do not claim originality, I have not been able to find in any textbook any mention of ammonia used as an enema, nor have I ever met anyone in England who ever heard of it. Yet I am convinced of its importance."—*The Therapeutic Gazette*.

OBSTETRICAL

SUCCESSFUL POSTMORTEM CAESAREAN SECTION.

J. F. Barnhill reports in the *Ind. Med. Jour.*, December, 1915, a case seen in consultation with Dr. W. G. Kelly and operated on by Dr. Hatfield. The mother, aged 36, was 7-months pregnant with her fourth child, dying of cerebrospinal meningitis secondary to aural infection, pneumococcic and of only two days' duration. Section was performed five minutes after death, a male child being delivered alive and surviving at least twenty-four days, to the date of the report. Quotation is also made from a report by A. E. Mack, of Omaha, in the *J. A. M. A.*, August 28, 1915. The mother was 36, within a week of full term with her fourth child. She died suddenly of what was determined at necropsy to be pulmonary embolism. The child was apparently dead when delivered shortly after the mother's death, artificial respiration and alternate applications of hot and cold water were unsuccessful, but resuscitation succeeded after injection of epinephrin into the stump of the cord. The child was alive and healthy seven months after delivery. —*Buffalo Medical Journal*.

BILATERAL TUBAL PREGNANCY.

Proust and Baquet report an emergency laparotomy on a woman of 29 for sudden severe pains and persisting hemor-

rhage. Both tubes contained an ovum of about two months' growth. One tube had ruptured and the other was enormously congested. The adnexa were removed on both sides but the uterus was left; part of an ovary must have been left also as menstruation continued since. They compare with this case forty-one similar observation that have been published, although in only thirty-three were the bilateral tubal pregnancies actually simultaneous. In conclusion they give the bibliographic references of eight-two cases of bilateral tubal pregnancy on record. Their personal case closely resembles that reported by P. Finley in 1910. Among the simultaneous cases mentioned are some published in *The Journal*, 1912, 1913 and 1915. The necessity for careful exploration of the adnexa on the other side is emphasized anew by this group of cases. If a hematosalpinx is found on the other side it should be removed without fail, as it is liable to rupture soon. In the case reported the intense pain was felt first on one side and at the time of the laparotomy was restricted to this, the ruptured side.—*The Journal of the American Medical Association*.

PROGNOSTIC SIGNIFICANCE OF THE URINE IN PUERPERAL INFECTION.

Schaefer states that after the temperature becomes high in puerperal infection the urine will be found of high specific gravity, dark colored and containing in solution indican and ethereal sulphates. If we can cause the disappearance from the body of all the phenol derivatives, the prognosis should improve. Catharsis and diuresis are indicated, and the density of the urine may be brought down below 1015. A low density, when associated with high temperature, is in itself a good prognostic, and the eliminant treatment will not be required. The obstetrical or rather surgical management, of course, goes ahead as usual, but the author believes that the bacillus coli communis plays a great role as a determining cause, and that intestinal hygiene and sanitation must be guaranteed in all puerperal disorders.—*The Medical Fortnightly and Laboratory News*.

Editorial

PUBLISHER'S NOTICE—The Journal is published in monthly numbers of 48 pages at \$1.00 a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money order, draft, or registered letter, should be addressed to the Business manager, C. S. Briggs, M. D. corner Summer and Union Streets, Nashville, Tenn.

All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

CANCER.

In Volume I No. 1 of *The Journal of Cancer Research*, Frederick L. Hoffman, in an article entitled "The Mortality from Cancer in the Western Hemisphere," collates many interesting facts, among them the following:

The mortality from cancer per 100,000 population in Uruguay, Japan, England and Wales, and the United States, according to organs and parts, is as follows:

	Stomach and Liver	Peritoneum, Intestines and Rectum	Female Generative Organs	Breast
Uruguay -----	35.6	4.6	12.2	3.7
Japan -----	40.	3.5	20.9	1.8
United States ----	29.6	9.5	23.4	14.3
England & Wales_	33.5	18.	24.3	18.6

These figures are very interesting and instructive in that they show rather conclusively, we think, that cancer is a local disease and not a systemic affection to be fought by diet, hygiene, etc., except insofar as sane living will defer old age, which is, as we all know, the most important predisposing cause of cancer. The great disparity between the deaths from cancer of the stomach and liver in Uruguay and Japan and the deaths from cancer of the female breast in the same countries speaks eloquently for some tangible local cause of cancer of the breast which should be conspicuous

by its absence in Uruguay and Japan. A careful study of the habits of the people in these countries may throw some light on the etiology of cancer of the breast at least. Why should the breast be so seldom the site of cancer in Japan and Uruguay, in both of which countries cancer of the stomach and liver are so common? This most probably is not due to inaccurate mortality statistics, the author maintains, since cancer of the breast is much easier to diagnose than cancer of the stomach. Furthermore it can not be due to better operative technic, since the operation for cancer of the breast in this country and England has been most radical for several decades. Earlier operations in malignant disease of the breast might cause this difference in the mortality rate, but it is hardly probable that the peoples of Uruguay and Japan are so much better educated in regard to tumors than the American and English people. Cuba also has a very low mortality from cancer of the breast.

So here are three countries, at least, in which for some reason or other cancer of the breast is relatively rare.

Is this simply a pathological vagary or will study of the marriage customs and sexual life so far as regards the age at marriage, virginity, the suckling of children and the average number of children, show marked differences in the customs of the peoples under discussion? Will there be any great difference in the clothing of the people so far as that might affect the breast?

Indeed it would be astonishing if there were not great differences in the dress and habits of these races and the greater the difference the better is our chance of singling out some one factor which is active in the production of cancer of the breast.

The investigation of the Registrar General of England and Wales has shown that cancer of the breast and ovaries is common among single women when proper correction is made for variations in the age distribution. It is also a well known fact that the undescended testicle is prone to malignant degeneration. Both of which facts would lead us to be-

lieve that glands which do not functionate according to the laws of Nature are more likely to become carcinomatous than glands functioning normally. In a way, lack of function leads to atrophy of parenchyma and fibrosis of intestinal tissue; chronic irritation produces a somewhat similar change and both these changes normally occur in old age. Age is not always to be reckoned in years but rather according to the condition of the tissues, and one part of the body may be old while the rest is young.

Until the physiological chemist learns the biochemical changes occurring in tissues in the precancerous stage and teaches us how to detect these changes, we must content ourselves in the fight against cancer by fighting old age and all conditions inviting local senility, such as abuse, lack of use and chronic irritations.

So far as cancer of the breast is concerned, the above figures would lead us to believe that study of the habits of the people of Japan, Uruguay, Cuba, the United States and England, would throw some light on the etiology.

FRAUDULENT INFANTILE PARALYSIS "CURES."

The Department of Agriculture Instructs Food and Drug Inspectors to Watch Interstate and Foreign Shipments for Fraudulent Remedies.

WASHINGTON, D. C., August 10, 1916.

Officials of the Department of Agriculture charged with the enforcement of the Food and Drugs Act expect that the outbreak of infantile paralysis will tempt unscrupulous persons to offer for sale so-called "cures" or remedies for this dread malady. They, therefore, have issued special instructions to the Food and Drug inspectors to be particularly alert for interstate shipments or importations of medicines, the makers of which allege that they will cure or alleviate this disease, for which, at the present time, no medicinal cure is known. The officials also warn the public that any

preparation put on the market and offered for sale as being effective for the treatment of infantile paralysis should be looked upon with extreme suspicion. Inspectors, accordingly, have been instructed to regard as suspicious, and to collect samples of, all medicines in interstate commerce for which such claims are made. Makers of such fraudulent remedies will be vigorously prosecuted whenever the evidence warrants action under the Sherley Amendment to the Food and Drugs Act. So-called remedies for infantile paralysis which are offered for import into the country will be denied entry.

The Food and Drugs officials are particularly watchful in this instance because it has been noted in the past that whenever a serious epidemic exists, unscrupulous dealers prey upon the fear or ignorance of the public by flooding the market with worthless, hastily prepared concoctions, for which they assert curative properties which have no foundation whatever in fact. In the present instance, inspectors already have discovered shipments of a few such mixtures.

The Department will do everything it can under Federal law to protect that portion of the public which is extremely credulous in times of panic and which will grasp at anything which promises protection or relief. The sale of such products at this time, the officials point out, is particularly threatening to the public health because many persons, relying on the false statements of impostors, neglect to secure competent medical advice. As a result, not only is the safety of the patient endangered, but in the absence of proper sanitary precautions, the likelihood of contagion is greatly increased.

It must be understood, however, that the Federal Food and Drugs Act applies only to products which are shipped in interstate commerce, that is, from one State to another, or which are offered for import or export, or which are manufactured or sold within a territory or the District of Columbia. Products which are made and consumed wholly within a single State are subject only to such State laws as

may apply and are under the control only of State health officials. The Federal law does not apply, for instance, to patent medicines made within the State of New York and sold in New York City. Persons buying or using a "remedy" made in their own State, therefore, must rely on the protection accorded them by their local health authorities.

PREVENTION OF INFANTILE PARALYSIS.

To control the present epidemic of infantile paralysis, according to a statement issued by the United States Public Health Service today, the chain of infection between persons harboring germs of the disease and the well members of the community should be broken. Infantile paralysis is probably caused by a very minute organism found in the nasal, mouth and bowel discharges of those who have the disease or who are carriers of the germ without themselves suffering from the ailment. All of the steps in the spread of the infection are not known, but if this germ can be prevented from passing from the infected to the well person, the disease will cease.

Infantile paralysis is not a disease of recent origin. Sporadic or scattered cases have occurred throughout the country for many years, but it is only during the last decade that the infection has assumed epidemic proportions in the United States. The present epidemic in New York City, on account of its magnitude and virulence, has awakened the residents of many communities to the danger of the importation of the disease into their own midst. This danger is real, but if due precautions are exercised it is believed that the epidemic will subside.

The actual control of the present epidemic must be left to the city, State and Federal health authorities. These organizations will properly quarantine and care for affected persons, prescribe sanitary measures and limit as may be necessary the travel of individuals in order to protect neighboring districts from the infection. Individuals and com-

munities, however, can do much toward their own protection.

Poliomyelitis is probably spread directly or indirectly, through the medium of infective secretions. Account must, therefore, be taken by communities of every means by which such secretions are disseminated. Promiscuous expectoration should be controlled. The common drinking cup affords a method for the interchange of materials of this nature and should therefore be abolished. Rigid cleanliness of glasses and utensils at soda fountains, in saloons and other public places should be enforced. Flies, roaches and other vermin, by coming in contact with infective secretions, may possibly convey them to our food and thus directly bring about the development of disease. Therefore eliminate insects. Street and house dust bear a definite relation to the spread of many infections and it is not unreasonable to presume that they may be a factor in the dissemination of infantile paralysis. Maintain strict cleanliness of streets, yards and alleys in order to prevent the breeding of insects and other vermin.

See that all garbage and waste are properly cared for and collected at regular and frequent intervals. Guard all food supplies, especially milk and other perishable products. Digestive troubles of children arising from the indigestion of food of questionable quality may lower resistance. Assemblies of children in infected localities are to be discouraged, if not actually forbidden. While the above measures are in a sense general, and applicable to many epidemic diseases, their importance should not be overlooked.

Summon a physician at once and immediately notify the health officer of the presence of the disease. If the disease is present in the community, medical aid should be sought whenever a child is sick, no matter how light the illness; many cases of infantile paralysis begin with a slight indisposition. Should the illness prove to be infantile paralysis, isolate the patient, place a competent person in charge, and reduce all communication with the sick room to a minimum.

Hospital care is preferable, not only for the child but in order to better safeguard against the spread of the disease. The sick room should be well ventilated and screened. Nasal and mouth secretions should be received in cloths, placed in a paper bag, and burned. The clothing of the child, the bed linen, and the excretions should be disinfected in the same manner as for typhoid fever, that is by boiling, the long continued application of 5 per cent carbolic, or other well recognized disinfectant. The same is true for dishes and drinking vessels. Nurses should exercise the same precautions as regards cleanliness of hands in caring for infantile paralysis patients as for those afflicted with other infectious diseases.

A child may convey the disease to others even after a lapse of several weeks. For this reason quarantine should be maintained for a considerable period, usually from six to eight weeks, and the above precautions should be adhered to during this time. Disinfection of the room following recovery is advisable.

RURAL HEALTH—AMERICA'S FIRST DUTY.

Washington, D. C., July -4—"The estimated economic loss which our nation suffers each year from typhoid fever and malaria alone aggregates \$928,234,880, leaving out of entire account the sorrow, the unhappiness, the misery, and the inefficiency which follow in their train." Senator Joseph E. Ransdell, of Louisiana, today addressed the Senate on the subject of "Rural Health—America's First Duty." "The greatest asset which our country can have," said Senator Ransdell, "is the healthy American citizen, and valuable as it may be to increase the health of livestock and vegetation, it is of far greater importance that we throw every possible safeguard about the health of the man who is responsible for that livestock and vegetation. Over 900 million dollars lost every year! A sum which is sufficient to put our country into a state of preparedness equal to that of any nation

in the world, enough money to give us the largest navy afloat and the most efficient army which the world has ever seen, is annually offered up as a sacrifice to two diseases which are entirely preventable. Enough money to pay the annual expense of every college student in the United States is absolutely thrown away every year." Senator Ransdell estimates the grand total loss from typhoid fever at \$271,932,-880 per annum, and the loss from malaria at \$694,904,750 per year; the total per capita loss from these two diseases being \$9.46. By comparative estimate it was shown that the United States Government appropriated \$5,016,176 for the investigation and prevention of the diseases of animal and plant life and only \$1,917,566 for the investigation and prevention of the diseases of man.

GIVE THE BABY A CHANCE.

Bad air, bad milk, over-crowding, poverty, dirt, ignorance, heat—these combine in summer to kill the city baby. It seems as though the brunt of the cities' sanitary sins were focused on the baby didn't ask to come, to live in a hot, dark, air-tight tenement, to be fed on dirty, half spoiled milk, to be pestered with flies and mosquitoes. He is not responsible for any of these conditions and it is his right that we have fresh air, clean surroundings and descent food. The United States Public Health Service issues free of charge to all applicants a bulletin on "The Summer Care of Infants." It should be in the hands of every mother."

THE UNITED STATES PUBLIC HEALTH SERVICE ASKS

Do you—

Clean your teeth and then expectorate in the washbowl?
Omit lunch to reduce weight and then overeat at dinner?

Go to the country for health and then sleep with your windows shut tight?

Wonder why you have earache and then blow your nose with your mouth shut?

Think dog muzzling cruel and then marvel at the spread of rabies?

Carefully select your brand of liquor and then feed your children unpasteurized milk?

Repeat the Golden Rule and then sneeze in somebody's face?

Go camping for your health and then place your toilet so that it drains into your water supply?

CREMATION ASSOCIATION OF AMERICA.

The fourth annual convention of the Cremation Association of America will be held in the auditorium of the Hotel Gibson, Cincinnati, Thursday and Friday, August 24th and 25th. All of our readers who believe in or are interested in cremation are cordially invited to attend. They are also eligible to associate membership upon payment of one dollar to the treasurer, Mr. E. P. Samson, 433 Sixth Avenue, Pittsburg, Pa., a formal application not being required. Money thus obtained is used for purposes of propaganda.

It is not only a source of satisfaction but pride to know that some of the most eminent members of our profession have been connected with the sanitary reform known as the cremation movement. In Germany it was advocated by Rudolph Virchow, in England by Sir Henry Thompson and Sir T. Spencer Wells, in France by Dr. Prosper Pietra-Santa, in Denmark by Dr. F. Levison, and in Italy by Drs. Gaetano Pini and M. de Cristoforis. In our own country, Dr. Francis Julius Le Moyne, a graduate of the medical department of the University of Pennsylvania, built the first crematorium in America at his own expense, and cremation was ardently promoted by Drs. Samuel D. Gross, Edward J. Bermingham, Felix Formento and Hugo Erichsen, the present president of the Cremation Association of America.

It will be news to many that the United States has forged ahead of Germany in the leadership of the cremation movement. There are 53 crematories here as compared to 48 in the Vaterland and two more are in contemplation, one at Salem, Mass., and another at Kansas City. We have also outdistanced Germany in the total number of incinerations, the figures being 86,006, up to the end of 1913, as compared to 76,350, up to the end of 1915. Statistics, recently published in "The Sunnyside," show there was an increase of 906 per cent in the number of cremations in America in 15 years, and that, as the man in the street would say, is certainly "going some."

Obituary

ELIE METCHNIKOFF, M.D.

Prof. Elie Metchnikoff, Paris, France, the last of the pioneers in bacteriological science, died of heart disease on Saturday in the Pasteur Institute, Paris, at the age of 72 years. He had been ill for several months, and his death had been expected momentarily. He was born in Russia May 16, 1844, and began his scientific career as a naturalist. It was while studying cellular embryology in the young of marine organisms that he discovered the phagocytic action of the leucocytes. From this followed his theory of inflammation that the hyperemia and pus formation were due to the rush of the leucocytes to the injured part in their effort to destroy the invading microorganisms. His theory of immunity was also based upon this discovery, the antibodies being products of the attacking leucocytes. He came from a short-lived family, and this fact turned his attention to the subject of longevity, from which followed his theory of the intestinal origin of arterial and other degenerations which shorten life and of the action of the lactic acid bacilli in destroying the noxious intestinal flora.

He entered the Pasteur Institute in 1888, and in 1895 was appointed its director. The Nobel prize in medicine was awarded him in 1908. It is impossible in a short notice to recount all that Mechnikoff has done for science, for he was working productively in this field for forty-five years, and will rank with Pasteur, Lister, Ehrlich, Behring, and Koch as one of the giants in the practical application of bacteriology to the saving of human life.—*Medical Record*.

Reviews and Book Notices

Venesection—A Brief Summary of the Practical Value of Venesection in Disease. For Students and Practitioners of Medicine, by Walton Forest Dutton, M.D., Fellow American Medical Association; Member Medical Society of the State of Pennsylvania; Allegheny County Society; Ex-President Carnegie Academy of Medicine for Prevention of Social Diseases; American Association for Advancement of Science, etc. Illustrated with Several Text Engravings and Three Full Page Plates, one in Colors. Philadelphia, F. A. Davis Company, Publisher, English Depot, Stanley Phillips, London, 1916.

Any effort made to bring about the renaissance of a valuable therapeutic agent only a few years back termed a "Lost Art in Surgery," by the late Prof. S. D. Gross, should be warmly applauded by the profession. This small volume has been produced with that end in view. The history of blood letting as given in this book is most interesting. The technique of the various methods of bloodletting is carefully drawn and the various diseases in which the methods bring about beneficent results are fully discussed. The book should be in the hands of every practitioner of medicine as a help in times when the physicians needs help in his battle for health.

Department of Commerce, Bureau of the Census. Sam. L. Rogers, Director United States Life Tables, 1910. Prepared under the Supervision of Prof. James W. Glover of the University of Michigan; Washington Government Printing Office. 1916.

We are in receipt of this exceedingly valuable statistical report. It represents the careful, painstaking investigation of mortuary statistics in the population of the United States based on the 1910 census and are valuable as not made up from selected risks as in tables made up by life insurance companies, but based upon general unselected population. The tables should prove of value to the general public and

especially useful to public health officials, physicians, sociologists, actuaries, statisticians and all interested in the improvement of the public health. The tables are conveniently arranged for reference and will no doubt prove of inestimable value to all who shall have occasion to use them.

Sex Problems of Man In Health and Disease—A Popular Study in Sex Knowledge, by Moses Scholtz, M.D., Chief of Clinic and Clerical Educator in Dermatology and Syphilology, Medical Department University of Cincinnati; Fellow of the American Medical Association, Ohio State Medical Society, Medical Academy of Cincinnati; Society of Moral and Sanitary Prophylaxis, etc. Cincinnati. Stewart & Kidd Co., 1916.

In this small volume the author presents his views upon the difficult subject of sex problems in health and in disease. This book constitutes an important addition to the propaganda for reform and betterment of social conditions. As the most effective means of lessening the evils that exist the author insists upon sex education and moral prophylaxis. The young generation should be taught the proper biological and social function of sex at an early age and questions relating to such conditions should be openly and plainly discussed to the end of educating the young to the social evils that result from ignorance on such subjects. The book is well worthy of study and should be in the hands of every one interested in the subject. That our readers can obtain an idea of the character of this work we give the table of contents: Introduction; Importance of Sex in the Life of an Individual; Sex in Health; Sex in Disease (see Pathology); Venereal Diseases; Functional Sexual Diseases—Chancroid, Syphilis; Conclusion.

Publisher's Department

"Elixir Saloform Comp. Flexner." Contains 20 per cent alcohol. An efficient remedy for Rheumatism, Gout, Cystitis and Uric Acid Solvent. Prepared for physicians' prescriptions only. Robinson-Pettet Co., incorporated. (See advertisement in this issue.)

"Tongaline Tablets have given my wife quicker relief for rheumatism, with which she is frequently afflicted, than any other remedy. Tongaline Liquid is one of the principal ingredients in all my prescriptions for rheumatic and neuralgic complaints. Furthermore I find it very efficacious for a rheumatic condition which I acquire as the result of exposure."

K. Y. ANALGESIC.

A man does not see with his eyes or hear with his ears.

He sees and hears with his *brain*.

He also feels pain with his *brain*.

Irritation or stimulation, applied to a sensory or even to a motor nerve, is reflected and transferred to the brain, and brain sensation registered. Much pain is referred to some surface area, e. g., the pain in purplatic disease that is felt in the sole of the foot.

Hence counter-irritation, or even analgesia applied over a surface area which is registering pain—has the effect in most instances of relieving that pain.

It is preferable in many cases to secure analgesia by means of external application instead of giving anodynes per os or hypodermatically.

K-Y Analgesic makes such analgesia attainable.

It is in fact, an Anodyne "First Aid."

By virtue of its contained camphor, menthol, and methyl salicylate it is active yet non-irritant. It does not blister, stain the skin, or soil the clothing, moreover it is water-soluble, can be easily removed and applied as often as may be found necessary. An especially valuable advantage is that it is *greaseless*.

Which assures prompt absorption, deep penetration, and quick as well as prolonged action and effort.

K-Y Analgesic is intended for the relief of headache, neuralgia, rheumatic pain, soreness or stiffness of muscles or joints, lumbago, sprains, contusions, etc.

It will prove a valuable aid to be used until the doctor can get in touch with his patient or to keep the latter comfortable between his visits. K-Y Analgesic will prove to be a good investment for the doctor to make, it will save him trouble and annoyance, and secure the gratitude of his patients.

NASHVILLE JOURNAL — OF — MEDICINE AND SURGERY

CHARLES S. BRIGGS, A.M., M.D., Editor.
W. T. BRIGGS, B.A., M.D., Associate Editor.

VOL. CX.

SEPTEMBER, 1916.

No. 9

Original Communications

PSYCHOLOGICAL FACTS IN MEDICAL TESTIMONY.*

BY T. D. CROTHERS, M.D.,
Hartford, Conn.

President New York Medico-Legal Society.

It is the general opinion expressed by trial judges and lawyers in active practice that medical testimony is unsatisfactory. The physician, however learned he may be, does not appear well in a critical examination concerning facts of science and his own experience.

In sharply contested cases, where motives and interpretation of conduct are in question, and attempts are made to secure some exact statements, it is found that experts differ widely, always on particularly and often on general principles.

The press echoes the opinions of lawyers and judges that experts can be found anywhere to swear to any statement; either for or against the question at issue. Often the conclusion is reached that this testimony depends upon fees and other considerations. This is most unfortunate, and while

*Read at the May meeting of the New York Medico-Legal Society, St. Andrews Hotel, New York City.

it has some basis in the history of famous trials and in individual instances, is unjust and creates a false impression.

Questions of responsibility and insanity with distinguished experts on both sides often reach opposite conclusions and are certainly very confusing. Both judge and jury are inclined to disparage such testimony and in many instances judges have instructed the jury not to consider the statements of physicians.

The fault lies here, more in the system and the loose way in which the evidence of this kind is collected and presented. Lawyers demand a degree of positiveness in answer to certain questions and expect scientific conclusions, which are by no means real in other departments. The law itself furnishes the best example of conflicting decisions and uncertain applications of principles, and why they should insist on science presenting an unquestioned array of facts, to which there can be no exceptions, is anomalous.

No medical expert or man of scientific character can on the witness stand state more than general principles, and when these are applied to particular instances, there must always be confusion and doubt.

There is one thing overlooked, in the study of these disputed cases, and that is the psychology of the expert. By this is meant, his degree of training and competence to determine the meaning of certain facts which are in question. Generally the expert is a hospital superintendent or an assistant whose whole life has been spent in the study of the insane and who lives in an atmosphere far removed from the normal. The patients he sees are chronic cases whose conduct is so abnormal as to be beyond question. In this field he is undoubtedly most competent to determine the range of thought and conduct, and decide on the competency of the person.

Going outside into fields of active life, and studying healthy types in different circles of life brings new conditions and new circumstances in which he can be no more expert to determine than others.

In reality the expert's knowledge is limited to the grades of persons that he is constantly associated with and also to the questions of management and housing, rather than the causes which have produced their difficulty. The inmates of an asylum are standardized, according to certain conceptions and supposed to follow a uniform progress without variation or change, hence the expert's judgment of people in other circles can not be compared with those whom he is familiar with.

If the questions at issue in the courtroom concern the pronounced abnormality of the prisoner, and these present symptoms, which are common to the expert's everyday observation, he is able to give very accurate judgment and make it very clear to others.

Such a witness called on to decide the disputed insanity of a business man who is probably on the border lines without very pronounced symptoms, of either sanity or insanity can not be positive or clear. He has never seen types of this class. He is not familiar with the surroundings or conditions that would lead up to this. A few years later, when the man became violently insane and comes under his observation, he can tabulate his symptoms and causes in a general way, with considerable accuracy, but go back to the beginning and determine which direction the defects will take, without being familiar with the surroundings and activities of the man, is practically impossible.

Often the hospital expert is a very close observer of symptoms of men under suspicion, and frequently he is not a reader of modern psychology and has little or no knowledge of the influence of mind over the body, and other influences which effect the mentality of the patient. Hence unless the patient is under his observation constantly, his judgment will vary widely.

The pronounced insane and the man or woman with feeble mentality of long duration are easily understood and when questioned concerning such persons the expert's answers are always clear. A second class of experts are us-

ually men who specialize in mental and nervous diseases; often connected with private hospitals as consultants and often have very large clientages. Such men, if they have been educated abroad, have a very strong bias for materialistic explanations and theories and particularly to label every sort possible phase of nervous disease. This has a very learned sound and often is a distinction with a difference and sometimes, it gives a very superficial view and confused ideal of real causes.

Many of these experts are teachers in colleges, authors of books and seem very scientific and profound in their descriptions of the disorders of the brain and nervous system. When they appear on the witness stand and are subjected to a very close scrutiny, their descriptions and explanations fail to impress one.

Not unfrequently these men are not readers of modern psychology, but have the most antique philosophies of mind and body which put them out of touch with many of the modern views of sanity and responsibility. Most of these men are very skillful in diagnosis, but their positions as teachers often make them dogmatic and assertive and narrow their real field vision which is painfully apparent in the courtroom.

When the text-books which they have written are produced by sharp lawyers who insist on their defending either their own opinions in books or in the cases in question, and ask for explanations of why they differ, there is considerable confusion. The witness is discomforted and his efforts to make clear, theories and teachings, only serve to increase the doubts and suspicions of his testimony. The witness has been accustomed to express himself to credulous students, and to an uncritical public in papers, and when these views are called in question he is not prepared to defend them in any satisfactory way. The impression he leaves is that of bias and uncertainty and the assertions that his testimony is paid for are accepted as the only explanation.

Of these two classes of specialists, the asylum superintendent makes a better impression on matters that he is

familiar with, and abnormal conditions that have come under his own observation in institutions. The nerve specialist does not appear so well, unless the conditions in question involve some nervous condition that he is more or less familiar with. Even then, his evidence is lacking in breadth, simply because he is not familiar with the conditions and surroundings, and mental atmosphere of the person in question.

There is a third specialist, who appears in courtrooms. He is the general practitioner, or the physician, or in active service as a surgeon or who follows some particular branch of practice. He is usually a highly respectable man who has had considerable service in police courts and has a taste for medico-legal questions. He is called as a witness to wills to decide the capacity of the testator and he is a general family adviser and often a teacher in colleges, and a leader in the circles in which he lives. He is usually able to make his views clear to the court and jury, but does not bear technical scrutiny and exhibits a want of knowledge when subjected to the questioning of the council. Oftentimes, he makes a very excellent witness, because he recognizes the limits of his knowledge and rarely assumes any technical questions, dependent on conditions of which he is not clear. In many of the important legal contests in this country, these three classes are in evidence. Each one seems to have a special personality of his own and curiously enough, there is a striking disagreement on general principles as well as on details.

Where these experts are prepared outside of the courtroom and the character of their testimony is determined and fixed, they may make a very good impression, but when the same class of experts appear on the other side and are actually taught to take an opposite view and support it by equally conclusive facts and evidence, there is great doubt and the impression that all this is a matter of consideration and purchase, is prominent in the minds of many persons.

Experts are no different from any other class of medical men, except they may have some special particular knowledge in certain directions. This may be faulty, or it may be

exact, but if it is along the line of their everyday work, it should deserve the highest place as a record of facts.

In disputed cases the attempts to draw dividing lines and boundaries concerning sanity and insanity, ability to determine and power of the will involves so much that is unknown and impossible to ascertain, with any kind of accuracy, that there must be confusion and uncertainty. The ordinary physician will of course differ. There is great confusion in the law concerning the exact degrees of responsibility and irresponsibility, and curiously enough, judges differ as much as expert medical witnesses. One class of judges will insist on the letter of the law, regardless of the spirit and intent. Another will interpret the law according to their own conceptions of what it should be.

If the judge is a broad-minded, liberally educated man, with a good deal of common sense, he will probably approximate justice more positively than would others under the same circumstances.

A reaction is evidently taking place in the administration of justice for capital crimes. The attempts to make out insanity and with a limited responsibility is so involved and so uncertain, particularly where the facts are not clear, that of necessity, more or less confusion will follow. The settlement of wills opens a very important field for expert testimony and here the same difficulty obtrudes itself. If the witness is not familiar with the surroundings and circumstances of the man who made the will and the probable motives of his life, he will miss the central point which the law seeks to establish as controlling.

Another great error is permitting witnesses to be examined technically in open court on questions that can not be settled by off-hand decision. As a result of this confusional condition in courts by medical expert testimony very serious miscarriages of justice occur.

A study of criminals confined in prisons bring out these facts. Many persons here have been found guilty from foolish technical and confusing testimony. Their real condi-

tions were never recognized. On the other hand there are men at liberty who are persistent violators and disturbing agents of law and order, who should come under legal control, but for a variety of reasons are permitted to remain at large. If they come under legal recognition, farcical trials give them liberty again. Evidently the fact is becoming recognized in a great many ways the attempts to adjust the disturbed conditions and administer justice in criminal courts is medieval and sadly needs change.

Judges, lawyers, and courts follow prestiges and theories and decisions from the past, regardless of any change in the conditions of life and modern conceptions of living. Medical experts add to this and bring into prominence the weakness and inconsistency of leaving the most obstruse conditions of mental activity and responsibility to a jury, who are largely incompetent by training and habits, to reach any just conclusions. A trained judge is far better able to reach just conclusions than twelve ignorant men picked up anywhere in the neighborhood.

The State of New York has passed a law which is evidently a very great advance. It provides that the judge, with the approval of the council on both sides, may appoint three experts or more, according to the gravity of the case. These experts shall have full opportunity to examine the prisoner at all times and under all conditions, and finally render a decision in writing, which will be submitted to the judge and come under the scrutiny of the council. These experts are to defend their written statements and have opportunity to make this defense on paper in direct answers to questions. This testimony read to the jury is to be accepted as final. The advantages here are that the expert can have sufficient time to study the questions in the case and compare them in every way possible, to determine their exact meaning. Should the experts make two reports—a majority and minority one, they can have opportunity to compare their differences, but it must be done on paper and this must be subjected to the scrutiny of council and the court.

This would do away with the unhappy exhibits which the expert is forced to make in his attempts to answer the cross questions of the lawyer. Two cases already settled under this new law have been very satisfactory. In all probability this will be extended to include nearly all disputed cases where mental health and vigor are concerned.

Proceedings of Societies

AMERICAN PROCTOLOGICAL SOCIETY.

Eighteenth Annual Meeting, Held at Detroit, Mich.,
June 11 and 12, 1916.

"Why Proctology Has Been Made a Specialty"—By T. Chittenden Hill, M.D., of Boston, Mass.

In this address Dr. Hill calls particular attention to the inadequate treatment that rectal fistula receives at the hands of the general surgeon. He claims that the general surgeon "has never taken the pains to learn the underlying principles of a fistula operation, nor has he the requisite skill, experience or inclination to carry out the necessary steps in the postoperative treatment of these cases, to bring them to a successful conclusion."

While in London there are two hospitals devoted to the exclusive treatment of disease of the rectum, Hill feels that better results can be obtained by establishing special departments in our large general hospitals. He urges that proctologists be appointed to all general hospitals. The many advantages of staff association, consultations, etc., in which proctology touches on the work of men in other fields, would prove of mutual benefit.

He believes that in the near future a fifth year will be added to the present four-year medical course. This fifth year will probably be devoted to the medical specialties and proctology should be included among them. The undergraduate should have the chance to acquire reasonable proficiency in the newer methods of examination and treatment of rectal disease.

Dr. Hill also presents a formal paper for the consideration of the members of the society under the title of

"Prolapsus Ani in Adults"—By T. Chittenden Hill, M.D., of Boston, Mass.

The theory is advanced that all cases of procidentia recti are the results of neglect or improper treatment of what was in the beginning a simple form of mucous membrane prolapse. Correction of the condition early may prevent serious infirmity later in life.

He describes at length an operation modified after that of the late Mr. Goodsall, of London, Eng.

In this operation he employs a multiple suture. He advises removing the excess of tissue distal to the ligature.

The operation is performed under local anesthesia and is advised for patients of all ages. It is particularly suitable for use in prolapse of the age.

The author claims that the operation is painless, short, and easily performed. There is absence of hemorrhage and the end results are satisfactory.

"The Postoperative Treatment in Rectal Surgery"—B. W. H. Stauffer, M.D., of St. Louis, Mo.

This paper is based upon a review of over 25,000 rectal cases treated, of which 1,500 were operative. Four hundred of these cases had been operated upon previously by approved method by other surgeons.

There are two reasons for these 400 secondary operations. First: Not selecting the operation indicated by the pathology. Second: Improper postoperative attention.

In selecting an operation or treatment the following requirements must be met. First: Complete restoration of functions. Second: Time required for cure. Third: Pain produced.

Unsatisfactory results—complete or partial incontinence often are caused by needless traumatism. He does not believe in divulsion. Divulsion of nerves causes sensory disturbances.

Incontinence may be due to fistula operation. Believes that where the fistula opens more than two inches above the sphincter the two step operation is indicated.

In dealing with malignancy he mentions the operation of Evans as producing the least mutilation and disturbance of function in selected cases.

Operations should only be performed after a definite diagnosis has been made.

It is insisted that the best results are obtained by proper diagnosis, careful preparation, appropriate operation, and careful after-treatment. The surgeon should always make the first dressing and should always inspect the operative field daily. The patient should be kept under observation until recovery is assured.

“Photography for Record and Teaching” — By Collier F. Martin, M.D., of Philadelphia, Pa.

Martin draws attention to the fact that students may be better interested in a lecture if their attention be fastened by an appropriate picture or illustration. After experimenting with photographs or drawings, passed among his class, and also with charts hung on the wall, he found that he could better interest the students with lantern slides thrown upon a screen. The darkness of the room tends to lessen the distraction and to encourage concentration. By having photographs of actual cases, as well as of the different steps in an operation, it was easy to interest the class and to explain far better than could be done even in a clinical lecture.

The equipment is briefly described and suggestions are given as to proper rendering of color values by the use of lightfilters.

Attention is called to the necessity of proper exposure and lighting to give negatives with sufficient detail to properly show pathologic conditions. Such negatives only are useful for illustrations, record or lantern slides.

Many case histories are incomplete without a photograph to clarify the description.

Hints are given for copying, making line drawings, diagrams and classifications to produce lantern slides suitable for teaching.

It is suggested that every hospital have a department devoted to photography. This could easily be operated in conjunction with the X-ray department.

"Abstract—Some Important Pathological Conditions About the Rectal Outlet: Lantern Slide Demonstrations"—By

Granville S. Hanes, M.D., F.A.C.S., Louisville, Ky.

Tubercular ulcerations do not occur as frequently in the mucosa of the rectum and sigmoid as is generally believed. Amebic and various types of bacterial ulceration produce dysenteric symptoms that often lead to emaciation and exhaustion.

Active tubercular ulceration is always accompanied by a decided increase in the temperature and pulse rate. These are not characteristics in other types of ulceration. In tubercular ulceration there is a history of constant and progressive symptoms while in amebic there is usually a history of improvement and relapses. Tubercular ulceration involving the rectum and sigmoid seldom yield to treatment. Amebic ulceration in this climate can be cured by one method or another.

Bacterial types of ulceration are usually very difficult to treat. Within the last two years I have found cauterization with the high tension electric spark to be a most valuable means of treatment.

Tubercular abscesses often occur about the rectum when patients otherwise show no evidence of tuberculosis. The abscesses and subsequent fistulae are characteristic in that there is a great tendency to undermining of the skin. The external openings are, therefore, large with a livid appearance of the surrounding cutaneous structures. They point to impending trouble which may be precipitated months or years hence. This being true it is of great importance that

we direct the habits, hygiene, etc., of individuals thus afflicted.

Fistulae of long standing with one or more very small external openings with a history of an extensive abscess are very difficult to cure. From external evidences they appear to be very simple. Usually the finger when introduced well into the rectum will be able to detect by careful palpation the hard indurated sinuses which often extend surprisingly high up by the rectum.

Internal fistulous openings rarely, if ever, perforate the rectal wall unless there is some pathology primarily in the rectal mucosa whereby its resistance is impaired. The internal openings of the fistulae are usually in the anal canal. The anal tissues are most always diseased before the abscess is formed, therefore, it is reasonable to suppose that the infection passes out through the diseased anal structures and is responsible for the abscess.

There are occasional fistulous tracts that extend up by the rectum to considerable heights and are very tortuous. It is difficult to follow these sinuses to their terminations when operating. When the wound heals and a small opening remains we may feel fairly certain that some part of the original fistula was not reached. It is then advisable to inject bismuth paste which will often effect a cure.

Pruritus ani is undoubtedly a local infection. The focus of the disease is below the pectinate line and at the anal margin. It has been my practice to remove the diseased tissues at the margin of the anus and from the emulsion of these diseased structures bacteria are cultivated and an autogenous vaccine administered to the patient. The operation with autogenous vaccine obtained in this manner give decidedly the best results.

“Abstract of Paper—Preliminary Report: Anatomical and Bacteriological Findings of the Anorectal Region .
Dr. J. Rawson Pennington, Chicago, Ill.

This preliminary report is submitted in lieu of my paper on “Indications for Making a Rectal Examination.”

Today the question of "focal infection" is uppermost in the minds of the medical profession. Much consideration has been given to practically every point in the body from which focal infection may emanate except that of the anorectal region.

Experimental investigations show that not only crypts of Morgagni, but what appears to be diverticuli are found also in this region. The Medical Research Laboratory of Chicago, to whom specimens were submitted for examination, reports that these diverticuli are lined with stratified squamous epithelium. Also that streptococci, straphylococci, colon bacilli, and other bacteria were found in their tunics and sacs.

We have observed that local and constitutional diseases may be produced by injecting the various bacteria obtained from these diverticuli into animals.

I am investigating the value of these diverticuli as points of focal infection and their role as causative factors in hemorrhoids, fistula, constipation, arthritis, endocarditis, and other acute, and chronic, and local and constitutional infections.

"Some Observations on Hernia In Relation To Intestinal Stasis"—By William M. Beach, M.D., of Pittsburg, Pa.

After reviewing the theories of Keith relative to nodal zones situated at different levels in the intestinal musculature the author says that:

1. We have tried to define intestinal stasis to be a physiologic-anatomic disturbance of peristalsis by an inhibiting influence through nodal zones of the myenterium, located in the œsophago-gastric junction, the duodeno-jejunal area, ileocecal region and in the rectum. This demonstrated in the laboratory must be certified clinically.

2. Anatomic distortions, as kinks, adhesions, ptoses, etc., lead to stasis by distributing the ganglia controlling peristalsis.

3. Hernia is a frequent manifestation of visceral displacement concomitant with stasis.

4. Long truss wearing with great pressure tends to rectal disease.

“Abstract—Intestinal Symptoms Due to Achylia Gastrica”

—By Alois B. Graham, A.M., M. D., F.A.C.S., Clinical Professor of Proctology, Indiana University School of Medicine, Indianapolis, Indiana.

In 5,758 patients presenting gastro-intestinal symptoms, and in every one of whom repeated gastric analyses were made, a diagnosis of achylia gastrica was made in 378. This is about 6.5 per cent, or a ratio of 1 to 5; 100 were males and 278 were females. The youngest was 17 years, the oldest 73 years. 60 per cent were between the ages of 40 and 60 years. In 90 per cent the subjective symptoms were chiefly intestinal in character. The bowels were reported regular in 38; constipated in 112; loose (diarrhea) in 142; irregular in 86. Diarrhea was the most frequent symptom and was present in 37.5 per cent of the cases. Description of three groups of cases. Description of the stools which were at times quite characteristic. Rectal symptoms rarely reported. Internal hemorrhoids found in every case. Rectal examination of no value, except that of exclusion, in determining the cause of the intestinal symptoms. In cases where constipation was chief symptom, there was not anything of special interest.

There was no return of the gastric secretion in any of the cases. The course of achylia gastrica is a protracted one. Under proper therapy the prognosis, as to fairly good health, is excellent.

Diet alone in the severe cases of diarrhoea was not successful. Astringents and intestinal irrigations were unsuccessful. Hydrochloric acid and pepsin in sufficient dosage is rational therapy and the only one which gave anything like satisfactory results. In some cases diet and hydrochloric acid failed. In these cases a nervous element was

present as the administration of bromides in suitable dosage produced most excellent results.

Patients are comfortable as long as they continue treatment. If discontinued even for a brief period, there is a recurrence of the diarrhea. These patients should be correctly informed as to the prognosis; namely, that as long as there is evidence of an absence of the gastric secretion, just so long must they adhere to a rigid diet and take hydrochloric acid and pepsin.

"Observation on Fissure in Ano"—Rollin H. Barnes, M.D.,
Editor of The Proctologist and Gastroenterologist., St.
Louis, Missouri.

The author considers fissure as an ulcer and believes that traumatic causes are not true etiological factors in the production of this trouble but that it is necessary that the tissues become inflamed and hence friable and easily torn in order that fissure be formed. He believes that catarrhal inflammatory conditions are frequently the result of an excessive carbohydrate diet and sometimes an excessive fat diet.

In the treatment of fissure he recommends palliative treatment by correcting the diet with reference to the excess of carbohydrates and fats and placing the patient on a proteid diet for a time. When operation is necessary he believes that the object should be drainage rather than paralyzing the muscular fibers. He also advocates the use of a small enema before defecation in order to avoid irritation from the stool. It is very important to keep the wound clean by hot sitz baths and the hot enema, in order that any foreign substance may not remain in the wound.

"Abstract—Malignant Transformation of Benign Growths."

By Frank C. Yeomans, A.B., M.D., F.A.C.S., Adjunct
Professor of Proctology, N. Y. Polyclinic Medical
School and Hospital, New York City.

The benign tumors of the colon and rectum considered were of the polypoid type—solitary polyp—multiple adeno-

mata and villous tumor. All originate from the intestinal mucosa, are of the same histologic structure but differ in number, size, form and the relative amounts of glandular and fibrous tissue present.

The writer cites the theories of origin of multiple adenomata as advanced by Meyer, Liebert and Schwab and G. Hauser and H. C. Ross's views on the formation of benign growths. Yeomans thinks these tumors inflammatory in character and notes the frequent history of colitis or dysentery in these cases, intestinal parasites as causal in others and the positive evidence of the role of irritation as furnished by therapy, colonic lavage, or colostomy and irrigation benefitting some patients and curing others. He reports a case of multiple adenomata in a man, aged 30, colostomized in 1913, with marked benefit. Many tumors have disappeared, the remainder have retrogressed and the patient is working regularly. There is no evidence of malignant change.

That benign growth become malignant is beyond cavil but its cause involves the same enigma as the cause of cancer itself. The writer cites the work of neoplasms of Waldeyer, Adami, Cathcart, and others, as well as modern research on the transplantation of tumors and the parasitic theory of their origin. He concludes: "All that can be stated positively is that cancer begins as a small local process; that it excites no reaction in the blood whereby a diagnosis can be made; that the individual cancer cell is the parasite of cancer, and whatever eventually explains the origin of cancer will also explain the transformation of a benign into a malignant growth."

Yeomans reports the transformation of a simple adenoma into an adenocarcinoma in a man, aged 76, who had rectal bleeding of 8 years duration, progressive constipation and a tumor that in recent years could not be reduced within the rectum. The tumor, $3\frac{1}{2} \times 2$ inches, was attached just within the anal verge. It was removed under local anesthesia and both clinically and histologically was adenocarcinoma.

Villous tumor or adenoma tends to recur in malignant form so should be extirpated early, thoroughly, and radically.

Multiple adenomata are the most important and serious type of benign growth of the intestines. Their usual site is the lower colon and rectum. Clinically they are malignant from diarrhea, hemorrhage, etc., and if neglected over 40 per cent become actually malignant. Improper local treatment, as snaring, curettage, and cauterization is followed by malignant recurrence in a large proportion of cases.

The curative, operative procedure indicated is enterotomy, either in the colon above the growths, or in the terminal ileum when the entire colon is affected. If the tumors disappear, the enterotomy may be closed. If they persist, after prolonged irrigation and the patient's general condition warrants it, partial or total colectomy is indicated with implantation of the ileum low down into the sigmoid, the operation being performed either in one or preferably in two stages.

"The Treatment of Hemorrhoids by a New Method"—By E. H. Terrell, M.D., Richmond, Va.

The author presents a simple, safe, and efficient method of curing selected cases of hemorrhoids by the injection of quinine and urea solution. During the past two years 127 patients have been treated by this method with only one recognized failure. Injection of quinine and urea in solutions of from 5 to 20 per cent strength produces starvation and atrophy of the hemorrhoids. The series includes only uncomplicated internal hemorrhoids. The results of the treatment of 127 patients justify conclusion that the method is simple, safe, and effective in properly selected cases.—*Abstract.*

"Abstract on the Etiology of Vaccine Treatment of Pruritus Ani." Louis J. Hirschman, Detroit, Mich.

Hirschman presented a preliminary report of his work on the bacteriology of pruritus ani as based on the original work of Murray at Syracuse. The work of H. C. Ward, bacteriologist, in conjunction with Hirschman's work shows that the streptococcus *fæcalis* was present in the twenty-five cases, but the vaccine treatment in these cases, especially that of the autogenous vaccines, has resulted in improvement or systematic cure in but four cases, while the treatment of the surgical lesions present, or by dietary, or hygienic measures, has resulted in relief or cure of all the remaining cases.

Abstract of Paper Entitled, "Further Observation on Pruritus Ani, Its Etiology and Treatment." (A sixth report based on results of original research.)

Dr. Dwight H. Murray, of Syracuse, N. Y., read the sixth annual report of his original research work on pruritus ani and vulvæ adding reports of 25 cases to the former series of cases, making 123, the bacteriology of which shows 95 per cent of the cases a streptococcic infection as the etiology for these troublesome conditions. He stated that his claim, that the streptococcus *fecalis* is the etiology of pruritus ani, is now confirmed by many leading physicians throughout the United States, who have been investigating the subject.

He finds from the experience of this past year that far better results are obtained by the use of autogenous vaccines with more than 1,000 million dead germs to I c. c.

He states that not one of the cases of pruritus ani and vulvæ pruritus scroti in the 123 cases have had diabetes and, as a result of this, he questions very strongly whether diabetes is ever the cause of these conditions, unless as a complication, and under such condition there would be a general pruritic condition of the skin.

Last year, in his fifth report, he described cases of pruritus ani that did not show improvement under the administration of the autogenous, streptococcic vaccine. These cases were later found to have a staphylococcic infection as a complication and when an autogenous staphylococcus vaccine was administered with the autogenous, streptococcic vaccine improvement resulted. He has found proof of this same condition during the past year and believes that these cases show a characteristic whitish appearance of the skin in spots, particularly around deep skin fissures.

He also found further proof of one of the conclusions, in a former paper, i. e., where there is a rectal pathology with pruritus ani, plus a skin infection, that an operation for relief of these conditions will cure the rectal pathology, but will not cure the pruritus ani. If the streptococcic skin infection does not exist the operation will be very sure to cure pruritus ani.

During the six years that Dr. Murray has been doing this work he has never had as prompt and satisfactory results from treatment as during the past year. In his report of the present condition of patients treated during the past five years, he shows that practically all of the patients have retained a part of the benefit originally received and a large majority of them consider themselves cured. Time will give the proof of this.

While some of the cases still have a little itching from time to time, they state that it is very easily controlled, by simple methods.

Dr. Murray is more firmly convinced than ever that operations for the cure of pruritus ani, such as Ball's operation and modification of it, are absolutely contraindicated and should never be performed.

"Ano-Rectal Injuries."—Samuel Goodwin Gant, M.D., L.L.D.

The author stated that while the rectum is protected by the buttocks, and bony structures, it is frequently injured

by external trauma, expulsion of hardened feces, and foreign bodies, swallowed or introduced through the anus, such wounds being contused, lacerated, incised, or perforated.

Laceration of one or all of the rectal coats, results from careless examinations, introduction of imperfect syringe nozzles, bougies, proctoscopes, or other instruments.

Perforating wounds are caused by bullets, knife thrusts, and pointed objects that have been swallowed, or introduced into the rectum, except when due to specific ulcers or cancer.

Recently many pneumatic rectal ruptures, the result of compressed air introduced through the anus, in a spirit of fun, have been reported.

The injection of carbolic acid into hemorrhoids is responsible for extensive ano-rectal injuries.

Symptoms—The chief manifestations of superficial ano-rectal injuries are, bleeding, sphincteralgia, frequent micturition, and painful defecation; symptoms that are exaggerated, when wounds are extensive.

Infected wounds are characterized by a chill, temperature, throbbing pain, swelling, and a thick yellow discharge.

In extensive injuries of the upper rectum, hemorrhage is profuse. There is shock, the patient collapses, and soon exhibits symptoms of peritonitis, when the peritoneum is involved.

Diagnosis—The diagnosis of ano-rectal injuries is easy, when the nature of the accident has been learned, the degree of hemorrhage, bruising and swelling have been noted, and the buttocks, anus, and rectum have been inspected, and digitally and proctoscopically examined.

Treatment—Minor injuries take care of themselves, while extensive injuries may require simple or complicated treatment.

Incised wounds are sutured, under aseptic conditions.

Contused, lacerated and pneumatic injuries are drained at one or more points, following irrigation, and the removal of ragged edges and necrotic tissue. Subsequently they are treated by drainage and topical applications, as fistula wounds.

Injuries of the bladder and urethra are immediately closed by sutures when feasible, but if not, the bladder is drained, and the wounds here and in the rectum are permitted to heal by granulation.

Small recto-vesical rents are sutured, but where the rectum or sigmoid is extensively injured, the bowel is resected, or an artificial anus is established.

Recto-vaginal tears are repaired by suturing the vaginal before the rectal side of the wound is closed.

“The Consideration of Rectal and Colonic Disease in Life Insurance Examinations.”—By Alfred J. Zoebel, M.D., Fellow of the American College of Surgeons; Chief of Department of Rectal Surgery, San Francisco Polyclinic and Postgraduate School, San Francisco, Cal.

All important data concerning the vital organs is obtained by a medical life insurance examiner by direct examination and by precise methods. On the other hand life insurance companies evidently do not attach much importance to the condition of the rectum and colon—not to mention the rest of the alimentary canal—for they seem willing to assume that these organs are free from disease solely from the favorable answers given by the applicant to routine printed questions asked by the examiner. That this is a fallacy, inasmuch as it paves the way to the acceptance of poor risks, and occasionally to the rejection of a good one, is shown in this paper.

Applicants almost invariably deny having or ever having rectal or colonic disease. The writer thinks that perhaps the main reason for this general denial is the ease with which these affections can be concealed from the examiner, unless he makes an examination.

The average individual knows little about his ano-rectal region, and unless there is severe pain or itching, alarming bleeding, or annoying dysentery, he thinks it of little importance and unworthy the attention of either himself or

the examiner. The rectal surgeon often sees individuals who look and feel in the best of health (outside of "a little attack of piles") yet who are found victims of well advanced malignant disease of the rectum or colon. Unless a rectal examination be made such a person could easily pass a life insurance examination.

The examiner should look out for those little fistulous tracts which cause no pain and discharge but little secretion, as they are frequently the primary manifestations of tuberculosis, and may appear in those who are otherwise apparently healthy. A severe stricture of the rectum may be present in a man outwardly perfectly healthy and insurable. If no history of his condition was volunteered such a person could pass an examination unless the rectum was examined.

If a history of hemorrhoids is secured, or if on examination, it should not be forgotten that although their existence does not constitute a good cause for rejection, they often accompany liver, spinal cord, genitourinary and uterine disease.

In cases where a suspicious anemia is found to be due solely to bleeding from hemorrhoids, these individuals could be conserved to the life insurance business if put in the way of regaining their health so as to become insurable.

If a rectal examination is made the condition of the genito-urinary organs in the male can be investigated at the same time, while in the female accurate information can be obtained about their pelvic organs without subjecting them to a vaginal examination. At the present time insurance companies do not demand an examination of the female generative organs but accept their answers to the questions whether they ever had any uterine disorder, and if pregnancy now exists.

In conclusion, the suggestion is offered that medical examiners should lay more stress upon the questions regarding the condition of the bowel and rectum. They should enquire carefully whether there is or has ever been a sanguineous, purulent or mucous discharge from the rectum. A history

of chronic constipation or of diarrhea should be considered worthy of further investigation. A rectal examination, both digital and instrumental, should follow if there is need therefor, or whether there is the slightest suspicion that by it something may be revealed.

That medical examiner is the most "efficient" who not only secures his company from poor risks but also saves it business which otherwise would be lost. The utilization of rectal examination helps attain "efficiency."

"Spasmodic Stricture of the Rectum."—By Louis J. Krouse, M.D., F.A.C.S., Cincinnati, Ohio.

Dr. Krouse says that spasmodic stricture of the rectum was often called phantom stricture on account of its imaginary existence.

He makes the statement that in the early part of the last century it was more frequently diagnosed than later on. At the present time, the opinion regarding the existence of such an affection is equally divided between those who are firm believers and those that doubt its existence.

After quoting the statements of various authors well versed in rectal pathology, he expressed his own opinion in its existence and reports several cases. He also makes the statement and agrees with a few writers who believe that spasmodic stricture is often the forerunner of the more serious disease of benign stricture of the rectum. He reports several cases.

He claims that spasmodic stricture is not a disease but only a symptom of some other disease located in the rectum or in an adjoining organ.

His conclusions are:

First—That it is not a common affection.

Second—That it is easily detected on digital examination.

Third—That it often terminates in an annular fibrous stricture.

Fourth—That it involves the lower Houston valve.

Fifth—That a rectal ulcer is the most important etiological factor.

Sixth—Curing the ulcer in its early stage lessens the chances of the development of an annular fibrous stricture.

Syphilis regarded as a contagious disease as other exanthemata is characterized by its chronicity and virulency. The only exception to its point of inoculation being confined to tissues covered by squamous epithelium, is within the rectum.

Its frequency in the rectum and anus is not realized and, in consequence is not recognized by the profession. Its relationship to fistulæ and stricture is emphasized, and the importance of tuberculosis in these two conditions minimized. The successful treatment of fistulæ is proverbial. The possibility of stricture, resulting from secondaries later in life, suggested.

Abstract—"Acute Angulation and Flexure of the Sigmoid a Causative Factor in Epilepsy. Report of Nine New Cases with Four Recoveries." By W. H. Axtell, M.D., A.M., Bellingham, Wash.

Review—In December, 1910, I published my first list of thirty-one cases—eight private and twenty-three asylum cases; in August, 1911, a further report on ten private cases with three recoveries. This included three additional asylum and two private cases, making in all thirty-six cases. The three reported cured have remained so for a period now of over four years. One additional case (No. 4) of the original list of ten private cases has had no return of the convulsions since ceasing treating two years ago; treatment seemed at the time to increase the irritation as reported.

Additional Cases—Since last report I have had nine additional cases with four of them remaining free from seizures for from one year to two and a half years, making in all forty-five cases reported with eight recoveries to date.

Observations—From my observations I am convinced that those who acquire epilepsy after the fifteenth year are more amenable to successful treatment than when commencing earlier in life. In my judgment surgery can give but little relief except where there is a definite history of inflammatory adhesions holding the angulations and flexures—in fact the condition of fecal stasis precludes surgery of the colon until the condition is first relieved, which when so relieved a prime factor in the production of the trouble is eliminated. A new and undescribed cause of the intestinal ptosis which is so generally present in these cases is the separation of the recti muscles, which are so essential to a thorough evacuation of the colon and for the support of the abdominal organs.

The essential failure of treatment of these conditions lies in the fact that so few recognize the true condition, and, if the condition is recognized, there is not sufficient persistence in relieving the condition, or an ignorance as to the amount of material the colon holds and as to when it is well emptied, that is the reason so many fail and as a result mutilating surgery is resorted to without getting results commensurate to the gravity of the surgery resorted to—the first intimation of the true condition is found upon opening the abdomen—then details are carried out which should have been used in the first instance, then surgery would be unnecessary.

“The Relation of the Roentgenologist to the Proctologist.”—

By Walter I. LeFevre, M.D., Cleveland, Ohio.

This paper calls attention to the advancement made in roentgenology in recent years, and gives statistics as to the men devoting their entire time to the subject. He also mentions the increase of special literature upon the subject, as well as the immense manufacturing interests which have sprung up.

The conclusion is drawn that to the proctologist the X-ray is of value just in proportion as he is interested above the sigmoid flexure. Below this point the proctoscope gives direct information.

Because of the expense and the refinements of technic the writer feels that the proctologist should work in conjunction with his friend the roentgenologist.

“Position for Sigmoidoscopic Work.”—By Donly C. Hawley, A.B., M.D., Burlington, Vermont.

A majority of writers express a preference for the knee-chest position, while a minority prefer some other e. g. Hanes, Sims, or the exaggerated lithotomy position.

Before the days of the pneumatic sigmoidoscope the position was of necessity such as would admit of inflation by atmospheric pressure. Here the knee-chest position was undoubtedly the most satisfactory.

The knee-chest position is trying and disagreeable for the patient and not easy nor always convenient for the operator.

Its use is frequently attended with embarrassment and fear on the part of the patient.

With the pneumatic tube the older method may be done away with.

Place patient in left lateral prone position with left arm drawn out behind back, the patient lying well over on left chest and stomach, the knees flexed, the right more than the left and placed above and well over and beyond the left on the table and with the back concaved as much as possible.

In this position the abdominal muscles are relaxed, while in the knee-chest position they are apt to be contracted.

In a majority of cases the instrument may be passed easily and quickly over the brim of the pelvis and into the sigmoid colon as far as required or to its full length.

This method not advocated exclusively, but a more thorough trial is urged.

"Tuberculosis Cutis Ani."—By D. C. McKenney, M.D., F.A.C.S., Buffalo, N. Y.

An interesting case of tuberculosis of the anal skin is reported.

From the clinical study of the case Dr. McKenney infers that the infection started from the anal canal rather than in the skin around the anal orifice. An active respiratory infection, associated with aphonia, seems strong evidence that the infection was carried in the feces to the anus. Two photographs of the local condition were presented.

"A Brief Report of Two Cases of Anal Herpes Zoster."—By Lewis H. Adler, Jr., Philadelphia, Pa.

Dr. Lewis H. Adler, Jr., stated that cutaneous lesions about the anal region are by no means unusual, and that the frequency of their occurrence is much less than one might reasonably expect from the function of the part; its more or less constant contact with germ-laden feces; the frequent congestion to which it is subjected and the attrition of the nates and adjacent structures induced by walking, etc.

That in this connection a very unusual condition, so far as his experience went, was anal herpes zoster, of which he had only seen two cases in his practice, both being in young women, one of whom thought she had contracted some venereal trouble from using towels in a public bathing establishment.

That in both instances, the eruption was preceded for several days by a mild febrile disturbance, with burning pains in the anal region; at times the sensations were neuralgic in character. That in both patients the lesions were confined to a definite area, affecting only one side of the anal cutaneous surface; that the eruption in neither case was very extensive nor numerous and there was no history of previous attacks or of similar trouble elsewhere.

That the vesicles in both cases followed the usual course of herpes zoster occurring elsewhere—the liquid they con-

tained was clear, translucent serum, at first; which gradually became cloudy and later puriform. That they never evinced any tendency to rupture and in the course of ten days or two weeks, they gradually dried to thin yellowish or brownish crusts, which shortly dropped off—after which there was left a reddish spot, covered with the epidermis; and that these spots were very slow in disappearing.

That the local discomfort in both cases was not lessened on the appearance of the eruption, but more or less burning was experienced, until the eruption had practically disappeared and that in one case it continued for several weeks afterward.

That the pain was so severe, in one case, that family physician found it necessary, on several occasions to prescribe an anodyne.

That the treatment in each case was similar—internally—liquor potassii arsenate, six drops was prescribed, locally, the parts were cleansed with a two per cent creoline solution and freely dusted over with borated talcum powder. Over this a wad of absorbent cotton was applied and kept in place by an appropriate bandage.

“Abstract.”—By Dr. William H. Kiger, Los Angeles, Cal.

Dr. Kiger reports six cases of pruritus ani treated by the vaccine method as suggested by Murray. Cultures were taken from the skin at the anal junction. In every instance, streptococcus haemolyticus found. No local application of any kind was used. The results are attributed to vaccine treatment alone. He discredits the use of stock vaccines, and suggests the use of autogenous vaccine only. Considers the focal infection as a prime factor in an etiologic way. Also he reports three cases evidently due to an infection from abscesses at the roots of teeth. He says that all of the cases reported had pyorrhea, and suggests a thorough examination of the teeth, together with an X-ray picture of the jaw. He believes that a reinfection often takes place.

Extracts from Home and Foreign Journals

SURGICAL

DISTINCTION BETWEEN BOILS AND ABSCESSSES.

The Supreme Court of Oklahoma, in reversing a judgment obtained by Plaintiff Mason, holds that a special accident and health insurance policy, providing for the payment of indemnity in the event the insured under certain conditions suffers from boils, is clear and explicit, and does not cover disability occasioned by a disease designated as "ischio-rectal abscess"; and the courts have not the right to enlarge on the plain provisions of such a policy. The court says that the plaintiff, so insured, alleged that he suffered from deep-seated" boils. There was evidence offered by him that he was suffering with a disease designated as "ischio-rectal abscess," and that this expression was synonymous with "boils." The trial court, however, found that there is a distinction between a boil and an abscess; that the term "ischio-rectal" merely determines the locality of the abscess; that an abscess is a condition wherein the internal portions of the anatomy are affected, as an abscess of the liver or of the brain, but that a boil is external in involving only the skin; that by a preponderance of the testimony it was shown that there is a good reason why insurance companies should include boils and exclude abscesses in a health indemnity policy, the reason being that boils rarely prostrate or disable the patient, while abscesses usually do; that the one is included and the other excluded as a matter of economy. Yet, after making these special findings of fact, the trial court proceeded to render judgment in favor of the plaintiff on the ground that an insurance policy should be construed liberally in favor of the insured, and, inasmuch as the plaintiff paid the premium in good faith and thought he was pro-

tected by the policy, he should not be bound by technicalities. Was the question presented a technical one? The supreme court thinks not. The language of the policy was clear and explicit. It insured against boils, not against abscesses. If the findings was correct that abscesses are internal, while boils are external afflictions, involving only the skin, and this court is bound by that finding, the policy conveyed a clear and explicit meaning, which involved no ambiguity or absurdity. It insured against boils, and the courts have not the right to enlarge on the plain provisions of the policy and insure against abscesses.—*Journal of the Amer. Med. Asso.*

THE TREATMENT OF HEMORRHOIDS BY INTERSTITIAL INJECTION.

T. Bird writes of this method of treatment of hemorrhoids, not because it is new, but because he thinks it does not receive the attention it deserves. It was used in this country by Hoyt some thirty years ago, and consists of equal parts of hazeline and distilled water, to which is added 10 per cent. of pure carbolic acid; the whole of the acid is not dissolved unless warmed. The bottle must be shaken, when the solution becomes turbid, and it is then ready for use. As much as 15 minims may be given at one sitting, though it is customary to begin with 3 minims. It usually requires eight or nine injections, at intervals of two days, to effect a cure. When this method is used, recurrences are very rare. Some cases in old people are better treated in this way than by cauterly or incision.—*Medical Record.*

EARLY ETHER ANALGESIA.

D. P. D. Wilkie recommends a method of producing ether analgesia for minor operations for which a local anesthesia is unsuitable and where the apparatus for administering nitrous oxide and ethyl chloride are not available. His method of producing brief analgesia is, after having made all prep-

arations for the operation, to place a Shimmelbusch mask over the patient's face and to pour 3 drachms of ether over the mask and bring a folded towel over the face and mask and keep it closely applied. It will be found that in from thirty to fifty seconds, provided the patient breathes deeply and regularly, the stage of analgesia has set in and will last from fifty seconds to three minutes, the usual duration being slightly less than two minutes. The writer finds this method suitable for such minor operations as incision and scraping of multiple abscesses of the neck, removal of septic ingrowing toe-nails, circumcision, cutting of projecting portions of two phalanges with bone forceps, etc. The patient is usually able to walk out of the operating room and feels no unpleasant after effects.—*Medical Record*.

MEDICAL

DEATH FOLLOWING THE STING BY A WASP.

Recently death occurred to an engine room artificer of Portsmouth, England, who had been stung by a wasp while sleeping on board his ship. The swelling of his neck was so great that he had to be sent to the Haslar Hospital, where he died on the following day. At the inquest Surgeon Caldwell Smith ascribed death to bacterial infection caused by the wasp's sting. The deceased was a healthy man, hence the virulence of the infection must have been extreme. A verdict of accidental death was rendered.—*The Med. Times*.

ERYSIPELAS TREATED WITH DIPHTHERIA SERUM.

About two years ago Pollak recommended ordinary diphtheria antitoxin in the treatment of erysipelas and one year later Koller, a Swiss, briefly reported a case of his own in which he following successfully the plan of Pollak. In the

Correspondenz Blatt fur Schweizer Aertze for July 8, Koller reports his second case. The patient was an old woman who was subject to attacks of facial erysipelas which had hitherto yielded to ichthyol applications. In the present attack ichthyol had been of no avail. After nearly all of the face and scalp had become involved, and the patient presented a high morning temperature, 3000 units of diphtheria antitoxin were injected. A remarkable decrease in swelling was very soon apparent and subjectively the patient was much better. By the end of twenty-four hours the swelling seemed to have disappeared, but an area of tenderness remained in the scalp, 1000 more units of antitoxin were given. She was now objectively well, although probably by reason of her age her general condition was somewhat grave, she being extremely weak, with insomnia and night sweats. At the end of five days she was discharged cured.

In comparing his two cases Koller finds several points of parallelism which show that the serum acts directly upon the cause of the disease. These refer to the sudden arrest and regression of the local process and a critical deferescence accompanied by profuse sweating. The second patient seemed doomed. Taken by themselves these two cases prove nothing, but taken in conjunction with Pollak's results they tend to corroborate the latter. The author apparently uses colloidal silver in the routine treatment of erysipelas and used it perfunctorily in the reported cases, but had never seen any constant improvement follow its use when given alone. It is possible, however, that the combination of serum and silver is superior to serum alone, and he would use both in severe cases or in the presence of special indications. He has seen cases in which a surprising improvement followed at once upon an intravenous injection of silver.

Koller's contribution is of great interest at the present time, because ichthyol has practically disappeared from the market as a result of the war. The price of the very small reserve is prohibitive for the treatment of a malady like erysipelas, the importer's price being quoted at \$16 a pound,

and with the profit of the distributor and dispenser added the consumer might have to pay as much as 2 or 3 cents a grain. In hospital practice the normally high price of the drug has made it necessary to use cheaper applications when practicable, and in consequence it has never been possible to determine to what extent ichthyol is really a life-saving remedy. But deprived of it altogether public and private patients alike should be expected to suffer somewhat, and the serum treatment might to a certain extent offset the loss. *Medical Record.*

THE TREATMENT OF TONSILLITIS.

A. T. Cuzner (Med. World) says that during ten years past it has been his custom to treat tonsillitis with local application to the tonsil of an exceedingly fine powder composed of benzoate of soda and sulphur.

To administer internally a cathartic of calomel and podophyllin, to be followed by saline cathartics.

As a corrective of the poisons generated by this disease, calcium sulphide, gr. 1-6, six to eight granules to be given each day for at least three days.

This plan of treatment has answered in such cases as have reached him for treatment.

Had his cases reached the point of suppuration of the tonsil, we would most assuredly have resorted to surgery for relief of our patients, for he holds that all collections of pus should be evacuated at the earliest practical moment.

But where the local inflammation has not reached this point the calcium sulphide and cathartics will usually prevent the same.

Many of the diseases of the North, when they take up their abode in our southland, seem of a less virulent nature, so it follows, as a matter of course, treatment has to be modified. At the North, Doctor Cuzner used to cauterize tonsils. Since residing in the South his treatment of many diseases

common to both sections has been modified.—*Practical Medicine*

OBSTETRICAL

ABDOMINAL PREGNANCY, PROBABLY PRIMARY.

McCann records the case of a woman, aged thirty-five, tertipara, who had an abdominal pregnancy that went to term. The waters were said to have come away. There had been very slight labor pains. She complained of a pain in the epigastrium. There was a hard mass in the left side which suggested the fetal head. No movements of a fetus could be felt, although she stated that she felt movements distinctly up till the preceding day. On vaginal examination the os was only enough dilated to admit the tip of one finger. No presenting part could be felt and there was no external hemorrhage, her chief complaint being epigastric pain, vomiting, and sleeplessness. Finally, about two teaspoonfuls of blood passed per vaginam. No decidua had been expelled. The abdomen was much distended and there was considerable venous engorgement visible in the abdominal walls. The abdomen was extremely tender on palpation, especially on the left side over the position of the fetal head and at other points where the fetus was palpable. It was however, difficult to make a detailed examination of the abdomen because of the extreme tenderness as well as the intestinal distention. The outline of the uterus could not be defined. The breasts were somewhat atrophied and in appearance were not suggestive of pregnancy, and no fluid could be expressed from either nipple. On vaginal examination well marked venous distention and blue discoloration were noted. The cervix was much softened and drawn upward, and the os uteri readily admitted the finger. No presenting part could be felt on vaginal examination.

An offensive purulent discharge issued from the vagina and the general condition of the patient suggested the pres-

ence of a severe toxemia. A free median incision was made, and as soon as the peritoneum at the upper part of the incision was opened a small quantity of black clot presented. On enlarging the incision the umbilical cord of a dark slate color, bulged into the wound. The hand was introduced and a rapid exploration made. The fetus was grasped by the legs and withdrawn without difficulty. The uterus was found to be enlarged to about the size of a five months' pregnancy, with a well-developed placenta, to which the umbilical cord was attached, firmly inserted in its posterior surface slightly in the right side. A strong odor of ammonia was perceptible during the operation suggestive of the presence of urine in the peritoneal cavity, although the amount of intraperitoneal fluid was inconsiderable. The intestines were carefully packed off with sponges and a rapid supravaginal hysterectomy performed, leaving the appendages in situ. The placental attachment seemed to fade away gradually on the lower part of the uterus, leaving the floor of Douglas' pouch covered only by the remains of the amniotic sac. Further remnants of the amniotic sac, brownish black in color, were found on the posterior abdominal wall, the uterovesical pouch, the descending and pelvic colons, the transverse colon and omentum, the ascending colon, and the peritoneum lining the abdominal wall. Although the fetus was dead, yet there were no adhesions of intestine or omentum to prevent its rapid and easy extraction.

The fetus of a female weighing 7 pounds had reduced full development within the abdominal cavity of the mother. It measured 14 inches from the vertex to the coccyx. The trunk and limbs were perfectly developed, but the head was enlarged, suggesting early hydrocephalus. The umbilical cord, 15 inches in length, was normally developed and was attached to a large well-formed placenta. The main placental mass was perched like a cap on the upper and back part of the uterus, while it spread laterally outward and still more downward so as to hide completely the uterine surface.—*The Journal of the Amer. Med. Asso.*

METHOD OF MINIMIZING PAIN OF LABOR.

The method used by Kostmayer is as follows: As soon as the pain of the first stage becomes definitely annoying, chloral is given in 10-grain dose and repeated in forty-five to sixty minutes, as indicated, as much as three doses being given, if necessary. When the character of the pain changes to the "bearing down" of the second stage, 1-8 grain of morphin is given as soon as this pain is severe enough to warrant it. It is rarely necessary to repeat the morphin, though this may safely be done after an hour or two. If labor is retarded in the least, or if in the judgment of the physician labor might safely be hastened, pituitary extract is given in graduated doses. As the presenting part begins to dilate the vaginal orifice, ether is given by the open-drop method at the beginning of each pain, and continued until the pain subsides.—*The Journal of the Amer. Med. Asso.*

Editorial

PUBLISHER'S NOTICE—The Journal is published in monthly numbers of 48 pages at \$1.00 a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money order, draft, or registered letter, should be addressed to the Business manager, C. S. Briggs, M. D. corner Summer and Union Streets, Nashville, Tenn.

All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

THE GENERAL PRACTITIONER.

In this day of specializing in medicine and surgery one must often ponder over the future fate of the family doctor, the general practitioner. Will he be with us fifty years hence or will his good work simply be a matter of history, or will his shoes be filled by one especially trained in the art of referring cases to the right specialist? Such in fact is almost the duty of the family physician today in the larger cities. He can treat a toeache or mild bellyache but so soon as the case begins to look a little serious, the specialist is called and the family physician steps down and out, or if the family is wealthy and can well afford two doctors, he is retained in the case as a matter of courtesy. Even then there is often a kind of tacit understanding that his fee must be in inverse ratio to that of the specialist. If such a state of affairs exists today what may we not expect in fifty years! But perhaps in fifty years, the layman will be so highly educated in medical matters by newspapers and magazine articles that he can diagnose his ills and head for the right specialist that very first time. But woe be unto him if he makes a mistake in diagnosis, for it must be confessed that even at the present day when specialism is in its infancy the average specialist is extremely narrow, and most ills that flesh

is heir to are ascribed by each and every specialist to his special organ. If specialism is narrow today imagine how much narrower it might be in fifty years!

The question is, can we do without the general practitioner, and even though this were possible in the cities, what about the small rural communities where there are not enough doctors to divide the specialties among them even though each were specialists in several branches at the same time.

Figure any way you wish and yet you find the answer just as hard. The family physician is going, he no longer occupies his once exalted position, but can you imagine him gone, his name a memory and his unselfish work his only monument? Indeed specialism itself is a monument which hordes of family physicians, working in the past, have slowly erected. But like the germ which succumbs to poisons it has elaborated, the general practitioner, in his hard work, in his search for the truth, has built in specialism a monument which would crush him. It would crush him if it could, but it can not. The general practitioner will remain with us and all glory that has been his in the past will be doubled in the future. The specialist too is here to stay, but in the future the specialist will be a better general practitioner than he is today. How will this happen when yearly, monthly, even daily each specialty is becoming more and more intricate? We do not know but we think it will happen through great changes in the curricula of our medical schools, in a better selection of teachers, in a more thorough foundation in first principles and much less attention to isolated facts. Anatomy and morbid anatomy, physiology and pathological physiology, normal physical diagnosis, and the signs and symptoms of disease will be so thoroughly taught by competent teachers that when the student graduates he will be eminently qualified to get the most out of his hospital work and practice. And in return make himself more trusted and more invaluable. Hospital internships are invaluable today and we would have many poor physi-

cians if all had to go into practice without some hospital training but, such training is partly wasted when the interne knows little anatomy, less pathology and much less physiology. So we must look to the specialists in these branches to teach the student so that when he leaves the medical school he will be qualified to do general practice or take up a special branch. In either case the foundation is laid and the edifice he erects will depend on his own labors. Today the foundation is the weakest part of the medical edifice but the medical curricula already show changes which promise much in the future and which will perhaps give us general practitioners such as have existed in the past and such as exist today in spite of the shortcomings of the old fashioned medical school.

DO YOU KNOW THAT

The hand that carries food to the mouth can also carry disease germs?

Health first is the highest form of safety first?

Tuberculosis and poverty go hand and hand?

The U. S. Public Health Service will send a booklet on flies and disease, gratis to all applicants?

The breast fed baby has the best chance?

Physical fitness is preparedness against disease?

Pneumonia is a communicable disease?

Cockroaches may carry disease?

One million two hundred thousand Americans die each year, it is estimated?

Heart disease, pneumonia, and tuberculosis cause more than thirty per cent of deaths?

Sickness lowers earning capacity?

The U. S. Public Health Service is the nation's first line of defense against disease?

Disease is the nation's greatest burden?

Sunlight and sanitation, not silks and satins, make better babies?

Low wages favor high disease rates?

A female fly lays an average of 120 eggs at a time?

Do You

Believe in national preparedness and then fail to keep yourself physically fit? ,

Wash your face carefully and then use a common roller towel?

Go to the drug store to buy a toothbrush and then handle the entire stock to see if the bristles are right?

Swat the fly and then maintain a pile of garbage in the back yard?

It is a remarkable fact, confirmed by many observations, that many physicians who have devoted considerable labor to the study of a particular disease have themselves died of that disease. One of the most interesting examples is that of John Daniel Major, born August 16, 1634, in Breslau, a physician and naturalist of no mean ability. Bitten early by the wanderlust, he studied at Wittenburg, took courses at many of the schools in Germany, and finally went to Italy, where he received the degree of doctor of medicine at Padua in 1660. Returning to his own country, he resided for a short time in Silesia, and in 1661 married at Wittenburg, Margaret Dorothy, a daughter of the celebrated Senner. The following year his young wife was stricken with a plague and died after an illness of eight days. Distracted by his loss, Major wandered up and down Europe studying plague wherever he found it in the hope that he might discover a cure for the disease which had bereaved him. Spain, Germany, France, and Russia were visited by him. He settled in 1665 in Kiel, where he was made professor of botany and the director of the botanical gardens. He made frequent voyages, however, always in quest of the remedy for plague. Finally, in 1693, he was called to Stockholm to treat the queen of Charles the Eleventh, then ill with the plague. But

before he could render her any service, he contracted the disease and died on the third of August.

The bubonic plague of today is identical with the black death of the Middle Ages. Primarily a disease of rodents caused by a short dumbbell shaped microscopic vegetable, the pest bacillus, it occurs in man in three forms; then pneumonic, which has a death rate of almost 100 per cent; the septicæmic, which is nearly as fatal, and the bubonic in which, even with the most modern methods of treatment, the mortality is about 50 per cent. It is a disease of commerce, spreading around the globe in the body of the ship-borne rat. It is estimated that every case of human plague costs the municipality in which it occurs at least \$7,500. This does not take into account the enormous loss due to disastrous quarantines and the commercial paralysis which the fear of the disease so frequently produces.

The disease is now treated by a serum discovered through the genius of Yersin. This is used in much the same way as is diphtheria antitoxin.

Plague is transferred from the sick rodent to the well man by fleas. The sick rat has enormous numbers of plague bacilli in its blood. The blood is taken by the flea which, leaving the sick rat, seeks refuge and sustenance on the body of a human being to whom it transfers the infection.

Since plague is a disease of rodents, and since it is carried from sick rodents to well men by rodent fleas, safety from the disease lies in the exclusion of rodents, not only exclusion from the habitation of man but also from the ports and cities of the world. Those who dwell in rat-proof surroundings take no plague. Not only should man dwell in rat-proof surroundings, but he should also live in rat-free surroundings. The day is past when the rodent served a useful purpose as the unpaid city scavenger. Rats will not come where there is no food for them. Municipal cleanliness may be regarded as a partial insurance against plague. The prayer that no plague come nigh our dwelling is best answered, however, by rat-proofing the habitations of man.

Modern sanitary science has evolved a simple and efficient weapon against the pestilence which walketh in darkness and striketh at noonday, and the U. S. Public Health Service has put this knowledge into practical operation and thus speedily eradicated plague wherever it has appeared in the United States.

Congress has recently made an appropriation for thirty-three additional assistant surgeons in the United States Public Health Service. These officers are commissioned by the President, and confirmed by the Senate. The tenure of office is permanent, and successful candidates will immediately receive their commissions.

After four years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon. Passed assistant surgeons after twelve years' service are entitled to examination for promotion to the grade of surgeon.

Assistant surgeons receive \$2,000, passed assistant surgeons \$2,400, surgeons \$3,000, senior surgeons \$3,500, and assistant surgeon-generals \$4,000 a year. When quarters are not provided, commutation at the rate of \$30, \$40, and \$50 a month, according to the grade, is allowed.

All grades receive longevity pay, 10 per cent in addition to the regular salary for every five years up to 40 per cent after twenty years' service.

Examinations will be held every month or so in various cities, for the convenience of candidates taking the examination. Further information will be furnished by addressing the Surgeon-General, United States Public Health Service, Washington, D. C.

CLEAN HANDS.

Disease germs lead a hand to mouth existence. If the human race would learn to keep the unwashed hand away from the mouth many human diseases would be greatly di-

minished. We handle infectious matter more or less constantly and we continually carry the hands to the mouth. If the hand has recently been in contact with infectious matter the germs of disease may in this way be introduced into the body. Many persons wet their fingers with saliva before counting money, turning the pages of a book, or performing similar acts. In this case the process is reversed, the infection being carried to the object handled, there to await carried to the mouth of some other careless person. In view of these facts the U. S. Public Health Service has formulated the following simple rules of personal hygiene and recommends their adoption by every person in the United States.

Wash the Hands Immediately

- Before eating,
- Before handling, preparing or serving food,
- After using the toilet,
- After attending the sick, and
- After handling anything dirty.

Obituary

JOHN BENJAMIN MURPHY, M.Sc., M.D., LL.D.

Dr. John B. Murphy, of Chicago, professor of the principles and practice of surgery in Northwestern University, died suddenly, from heart disease, at his summer home on Mackinac Island, Mich., on August 11th. Dr. Murphy had been in poor health as a result of overwork during the winter, but was not thought to be dangerously ill; his condition was considered to be partly the result of his having been poisoned at the banquet given to Archbishop Mundelein at the University Club, Chicago, last winter.

Dr. Murphy was born in Appleton, Wis., on December 21, 1857, and was educated in the public grammar and high schools, afterward entering Rush Medical College, Chicago,

from which he was graduated in 1879. After three years of general practice he went to Germany for study, and on his return he entered the field of clinical surgery in which he achieved great distinction, and to which he had contributed largely. In 1902 he was awarded the Laetre medal by Notre Dame University, a medal given each year to a Catholic layman who has done conspicuous service to humanity, science, art, or religion, and his work was recognized also by the University of Illinois which bestowed the degree of LL.D. on him in 1905, by the Catholic University of America, which gave him the same degree in 1915, and by the University of Sheffield, England, which in 1908 honored him with the degree of M.Sc. In addition to his work in the Northwestern University Medical School, Dr. Murphy was professor of clinical surgery in the Chicago Postgraduate Medical School, advisory surgeon of the Cook County Hospital and the Alexian Brothers' Hospital, chief surgeon at Mercy Hospital, and attending surgeon at the West Side Hospital. He was a member of the American Medical Association, of which he was president in 1911, the Illinois State Medical Society, the Cook County Medical Society, the American Association of Obstetricians and Gynecologists, the American Surgical Association, the Southern Surgical and Gynecological Association, the Western Surgical Association, the Chicago Orthopedic Society, the Chicago Surgical Society, the American College of Surgeons, and the Mississippi Valley Medical Association, an honorary member of the Royal College of Surgeons of England, and a life member of the Deutsche Gesellschaft fur Chirurgie, and of the Societe de Chirurgie of Paris.

Dr. Murphy, besides being gifted with an exceptional technical skill, was a man of striking originality, and he enriched medicine with many useful inventions; two of the most noted of these were the well-known "button" for intestinal anastomosis, and artificial pneumothorax, by the injection of nitrogen into the pleural cavity, for the compression and "splinting" of the tuberculous lung.—*Medical Record*.

Publisher's Department

"Pepsin" is undoubtedly one of the most valuable digestive agents of our materia medica, provided a good article is used. *Robinson's Lime Juice and Pepsin* (see advertisement in this issue) we can recommend as possessing merit of high order.

The fact that the manufacturers of this palatable preparation use the purest and best pepsin, and that every lot made by them is carefully tested before offering for sale, is a guarantee to the physician that he will certainly obtain the good results he expects from pepsin.

STRAINING AT STOOL.

It is pretty safe to say that any bodily condition that is aggravated by pressure or congestion is aggravated by that daily straining at stool which is the rule rather than the exception with such a large percentage of humans.

When one stops to realize that in the act of defecation, every abdominal muscle is brought into play, and that many individuals customarily strain at stool with a force great enough to cause their faces to flush and their temporal veins to bulge out, then it is that one appreciates the tremendous force brought to bear locally upon the abdominal and perineal muscles and generally, upon the whole body.

Since defecation is a necessary function, and can not be suspended, it would seem that the best remedy for the difficulty of defecation would be to supply the lubrication that is often lacking.

Whatever will supply such lubrication without enervation or untoward after-effect would seem to be the most desirable method.

There is one outstanding reason why "Interol" does away with, or at the very least minimizes, straining at stool, name-

ly, "Interol" has a peculiar *lubricating body* by which it mixes with the feces before they are feces, spreads over and mixes with them and lubricates them in their passage through the colon, until they reach the rectum, from which they are finally expelled without necessity of very much straining.

There are other features "Interol" possesses, but this one is perhaps the greatest, and if you are personally interested in this subject, we would be very glad to send you a pint bottle with our compliments, so that you may make personal observation without having to take out word for the merits of "Interol."

"I prescribe Tongaline very frequently as a remedy for excess of uric acid, which is often the cause of rheumatism, and it is my sheet anchor for that condition. I also find Tongaline very beneficial in muscular pains due to a sluggish liver and inactive bowels. When a patient comes to me complaining of soreness all over, I place him upon Tongaline and it has never disappointed me."

OVERCOMING HEPATIC ENGORGEMENT.

Active stimulation of the liver is often urgently needed in certain diseases—notably those of an auto-toxic nature, or characterized by faulty elimination—but not infrequently the efficiency of the remedy used is modified, or completely nullified, by the catharsis incidentally produced. In Chionia, a preparation of *chionanthus virginica*, the practitioner fortunately has an effective cholagogue that can be relied upon to increase the functional activity of the liver to a marked degree, without unduly stimulating the bowels.

Chionia is invaluable, therefore, for relieving hepatic engorgement, overcoming biliousness and promoting free elimination of the biliary products. In other words, the use of Chionia assures the restoration of hepatic efficiency, but unlike other cholagogues, without catharsis or purgation.

THE COMMONEST HUMAN ILL.

Probably the commonest single ill of modern mankind is what in lay parlance is termed dyspepsia, or in more scientific circles, gastric insufficiency, peptic deficiency, apepsia, and so on *ad libitum*. The actual condition, the result of abusing the stomach by improper food, irregular feeding, bad habits, etc., is a marked decline in the secretory activity of the gastric glands. The symptoms are legion but well summed up by the patient when he speaks of his suffering as "stomach trouble."

Recognition of the true state of affairs leaves the physician but one course to follow, activation of the glands of the stomach. Bitter tonics, dilute acids, and remedies galore have been used with varying degrees of success, but the remedy that has proven most uniformly satisfactory in restoring functional activity of the gastric glands is Seng. This is a trustworthy tonic to the stomach, a true secernent, that may be relied upon to restore the physiologic activity of the glands and thus overcome the distress and discomfort that make the gastric patient's life so miserable and burdensome. Have you some troublesome case of gastric insufficiency? You will be highly gratified at the result you can obtain with this useful remedy. Write for a sample to Sultan Drug Co., St. Louis, Mo.

NASHVILLE JOURNAL

— OF —

MEDICINE AND SURGERY

CHARLES S. BRIGGS, A.M., M.D., Editor.
W. T. BRIGGS, B.A., M.D., Associate Editor.

Vol. CX.

OCTOBER, 1916.

No. 10

Original Communications

ACUTE APPENDICITIS WITH PERITONITIS. THEIR RELATION AND TREATMENT.*

BY JOHN WESLEY LONG, M.D., F.A.C.S.
Greensboro, N. C.

Acute appendicitis should always be hyphenated with peritonitis, or what is better, two hyphens (=), making the algebraic sign of equation, since acute appendicitis continued equals peritonitis. They are as inseparable as cause and effect. While the latter does not always prove the presence of the former, the former rarely fails to produce the latter. The relation between the two is so close that the one often overshadows the other. Patients are brought into the hospital in the ambulance with abdomen distended, rigid, tender, knees drawn up, frequent pulse, septic temperature, etc., with the diagnosis of "appendicitis." Strangely enough, the more serious lesion is overlooked in the presence of the initial appendicitis. I would not have you think for a moment that the appendix should be disregarded. Nay, verily, but I do desire to focus your attention upon the larger and

*Read before the North Carolina Medical Society, April 18, 1916.

more destructive phase of the subject. Appendicitis, whether acute or chronic is, surgically speaking, a very simple problem; peritonitis is ever a grave menace to life. The one may be compared to the murder of the Austrian Crown Prince; the other is more like the resulting conflagration that has embroiled almost the entire world.

It is not enough to say "patients with acute appendicitis should be operated upon before peritonitis developes." Even the most ignorant layman will admit so self-evident a proposition after peritonitis is well under way and the patient is getting bad off. It is gratifying to note that the proportion of cases of appendicitis with peritonitis as its chief feature is less than in former years. I hasten to say that delay till peritonitis developes is not always due to inertia upon the part of the family physician. Often he has to contend with the ignorance of the patient, the prejudice of the family and the perniciousness of meddling neighbors. Nevertheless, it behooves us to take inventory of our knowledge concerning these desperate cases and establish as nearly as may be possible well-defined rules for their management.

While accumulated experience has crystalized into well-settled convictions concerning this subject, there are yet many questions relating thereto that must be regarded as *sub judice*. Also it must be confessed that the conviction of today may be the doubt of tomorrow. Hence, we must ever maintain the attitude of the student. Another reason why a prudent man hesitates to recommend any special line of treatment is that the unthinking may imagine that the particular method advocated applies to all cases. Nothing could be further from the truth. The subject is so large that we will notice only certain aspects of it.

THE TIME TO OPERATE.

In deciding when to operate no hard and fast rules can be relied upon. One's surgical judgment is the safest guide. As a general proposition, a patient seen within the first twenty-four, forty-eight, or even seventy-two hours should

be operated upon promptly, whether it be daytime or night. You will not understand me to say that it is safe to wait the time limits just mentioned. I urge just the contrary. Every hour lessens with increasing rapidity the chances of recovery. Nor is it exactly correct to measure time by hours alone. The general morale of the patient must be considered. Can he withstand the added trauma of the operation plus the anesthetic? Is there some complication present that may be made worse by the operation? I lost an elderly man recently who was brought in early enough to come within the time limit. Operation was done at once, but the man died within twenty-four hours. His death was not due to appendicitis nor peritonitis, but to nephritis, as was shown by scanty urine, casts, albumen, delirium, and coma. Delay would in all probability have given him a better chance. Postponement carries an extra hazard in children because their omentum is undeveloped, they stand starvation poorly, and their resistance is more readily broken down.

LATE OPERATIONS.

Certain of these patients are seen too late for an early operation. This condition is always a deplorable one multiplied ten-fold. They require the most judicious handling. Figuratively, they are walking over thin ice. The least jar, as from operation, anesthetic, purgation, or even rough palpation, may cause them to break through.

What then shall we do? Ochsner has taught us some invaluable lessons touching the management of such cases. In the first place, let me urge you to neither purge nor feed. There is nothing so harmful in the presence of peritonitis as purgation and feeding. Both increase the gas in the alimentary canal. Gas promotes peristalsis, peristalsis spreads infection. These patients should be propped up, either by elevating the head of the bed or the body of the patient. The position must be a comfortable one, else it is wiser to leave the patient prone. He should be sustained by small nutrient enemas and hypodermoclysis of glucose in salt solution or

sterile water. The Murphy drip method is applicable here. If nauseated or the stomach dilated, frequent gastric lavage is an invaluable remedy. If internes would carry a stomach tube about their necks instead of a shiny cow-horn shaped stethoscope in their outside coat pocket they might be of more service to their patients. In the hospital where I work the nurses are taught to do lavage. They frequently save life thereby.

Operation is best done when the peritonitis is receding rather than spreading. The most gentle manipulation is demanded. In some instances the abdomen may be opened by a puncture incision, using a local anesthetic or a few whiffs of gas. Just a tiny nick through which to insert a rubber tube is sufficient. It is often best to do this without removing the patient from the bed. The tendency among surgeons today is to not delay unduly opening the abdomen even in the worst of late cases.

Some very wise surgeons refuse to remove the appendix, preferring rather to do so later. Certainly, should the patient survive, the appendix can be removed with greater safety subsequently. However, I have always felt that when more than a puncture wound is made and the appendix can be easily removed, it is well to do so, otherwise leave it alone. Here again the general condition of the patient must be carefully studied. It is as important to know what kind of a patient the disease has, as the kind of disease the patient has.

THE ANESTHESIA.

Every factor brought into use in abdominal surgery assumes added importance when applied to appendicitis with peritonitis. The more severe the case, the greater the influence of each factor. This is particularly true of the anesthesia. Nothing connected with abdominal surgery is so barbarously done. Go where you will, in the clinics of this country or Europe, the anesthetics one sees make a conscientious man shudder. Crile has done more than anyone else to teach us the truth regarding anesthetics. Whether or not

his anoci association produces less shock than other methods may be questioned, but most assuredly the principles he lays down are correct. Under no other circumstances does a faulty anesthesia produce more disastrous results than in patients septic from acute infectious appendicitis with peritonitis. Whether one uses ether, gas, or a local anesthetic, he can not walk too delicately.

It gives me great pleasure to say, based upon a somewhat extensive observation both at home and abroad, that America, the birth-place of anesthesia, is leading the world in the matter of safer anesthesia. The indictment brought today is fast losing its significance. Progress is noted in the abolition of chloroform, the open drop method of giving ether so widely popularized by the Mayo Clinic, pharyngeal and intratracheal methods, gas-oxygen anesthesia, and the more extensive use of local anesthetics. But above all else the improvement consists in employing trained anesthetists. No anesthetizer can be called an expert who spends a good part of his time talking with those about him or watching the surgeon to see how he may do the operating himself, the first chance he gets. A nurse with proper qualifications makes a very efficient anesthetist.

THE INCISION.

The incision is a matter of considerable moment. In chronic conditions one may employ almost any incision he fancies. In acute septic abdominal diseases it is imperative that it give the readiest access to the lesion. I have tried every kind of incision, the midline, straight rectus, transverse, semilunar and oblique. I finally settled down to the latter as being the most serviceable.

The incision employed is essentially that of McBurney, though considerably amplified. The illustration* shows clearly its location and successive steps. Note its relation to the

*The drawing was sent to Dublin, Ireland, to illustrate this paper in the "Dublin Journal of Medical Science." Owing to the war conditions it has not yet been returned.

umbilicus, iliac crest and pelvic portion of the abdomen. The skin and fat have been incised and drawn apart and the fibres of the external oblique separated. This gives a wide exposure of the deeper layers of the abdominal wall. One can now determine by inspection and palpation the intra-abdominal conditions far better than was possible from the outside. This method of examining the abdomen I have not seen mentioned. Having confirmed the pre-operative diagnosis it is easy to decide whether to enter the abdomen high or low, close to or through the rectus sheath, or nearer to the iliac crest.

The muscular portion of the internal oblique is opened with forceps. This brings us to the transversalis fascia which is incised in line with the internal oblique. The fascia tends to contract, hence it is well to grasp its edges with forceps as appears in the illustration. In the subsequent closure care should be taken to suture the transversalis, since it is probably the best safeguard against hernia. The peritoneum may be opened in any direction desired. The oblique incision brings one directly into the right iliac fossa. If the appendix be "at home" it is easy to find and remove. Should it be hanging over the brim, flirting with the ovaries, or wholly within the pelvis, or located post-cecal, or should it be of the undescended variety, it is still comparatively easy to reach.

The lower end of the incision which lies over the pelvis may be lengthened if desired. In doing so no muscular fibres should be cut. The sheath of the rectus is entered and opened downward, pushing the muscle aside. Sometimes only the skin and fat incision need be made longer. Through the remaining layers of the abdominal wall a short transverse incision can be made for pelvic manipulation or a puncture done through which to introduce a drain. The same is essentially true of the upper end of the incision when one wishes to go higher in the abdomen, either for exploration or drainage.

The closure of an incision made after this manner is comparatively easy. But the great advantage is that it leaves the abdominal wall strong, even though two or three drains are employed as shown in the illustration. While one would rather have a hernia than a hearse follow his operations, he naturally prefers neither.

DRAINAGE.

I approach this part of the subject with some trepidation. First, because I am addressing an audience reputed for its conservatism as well as its wisdom; and second, because I stand in the presence of perhaps the greatest surgical authority in the world, who has kindly consented to discuss this paper.

There is no practice in surgery that is more firmly established than is drainage in septic cases. In fact drainage is the *sine qua non* in most instances. Before the coming of the abdominal surgeon, nature drained many of these patients by rupturing the abscess into the bowel. The septic pus lying against the intestine softened and weakened the tissues till finally the pressure caused them to yield and the pus would escape into the gut. Shortly afterward a pint or more of bloody pus would pass per rectum. When the doctor paid his next visit the patient would be sitting up in bed hallowing for something to eat. Thus nature cured the patient by drainage.

In the matter of drainage the peritoneum naturally played an important role. The first thing it does when invaded by infection is to pour forth an abundance of serum. It is easy enough to demonstrate the presence of peritoneal fluid by catheterizing the pelvis through the abdominal incision. A glass catheter gently slipped to the bottom of the cul-de-sac does no trauma nor is it likely to spread infection. It is not unusual to find the pelvis half full to running over with serum within twelve to twenty-four hours of the initial symptom. The fluid found varies from a light straw-colored serum to one of greater or less turbidity. It often resembles

pus due to the superabundance of white blood cells. The peritoneal fluid is the patient's first line of defense, zealously trying to prevent systemic invasion. To mop it out or drain it away is to rob the patient of his best protection. The earlier operators lost many of these patients because they not only drained but washed out the abdomen with large quantities of salt solution. It is perhaps fortunate that only a small portion of peritoneal fluid will escape through drains. Indeed many surgeons go so far as to say the peritoneum can not be drained for more than a few hours at the farthest, since the rapid formation of adhesions precludes the possibility of long continued drainage. Speaking of adhesions, what an irreparable injury the surgeon does his patient whose abdomen he drains without sufficient cause!

But let us turn for a moment to those cases which all agree should be drained. In what way does drainage benefit the patient. The answer is two-fold. First, it removes at once the excess of septic fluid. The second benefit is quite as important; namely, it disturbs the pathological equilibrium. The incision plus the escape of septic fluid relieves the tension and starts the lymphatic current outward rather than toward the diaphragm, while intra-abdominal pressure promotes exosmosis. The peritoneum is thereby given the opportunity to dilute and absorb more slowly the infection lodged in its innumerable recesses. The result is that the patient is not overwhelmed by the toxins. How else can you explain the recovery in those fulminate cases which are cured by simply making a button-hole incision and sticking in a small drain.

Nor is this all the peritoneum does. Secondary abscesses, which so often occur notwithstanding the abdomen has been drained after the most approved fashion, are evidence that the peritoneum continues to safeguard the patient. Such an abscess means that the peritoneum failing to absorb all of the infection rallies its resources and circumscribes the resulting pus by the formation of adhesions. In other words,

the peritoneum does most of the work while the surgeon gets the credit for it.

A careful study of the subject forces us to the conclusion that while in the vast majority of instances drainage should be employed, yet under certain circumstances the peritoneum is far more able to cope with infection alone, and should not be handicapped by the presence of a foreign body in the shape of a drain.

Were you to ask me the dividing line between drainage and non-drainage cases, I would have to confess that the distinction is not yet clearly defined. I know this: I have drained my patients that I am now convinced need not have been drained; I have omitted drainage in only two and later regretted it. My records show twenty-nine patients having acute appendicitis with more or less peritonitis and fluid in their abdomen in whom no drainage was employed, and all made a perfect recovery. While writing this paper I operated upon a young man whose pelvis was full of creamy-looking serum. The abdomen was closed and he made a normal recovery. The same is true of a young lady with her pelvis and lower abdomen full of straw-colored serum. A patient not drained recovers much more smoothly than when drained.

I recognize that this practice is debatable ground. It is the advance firing line of abdominal surgery. In the solution of the problem the clinical surgeon and pathologist must work hand in hand. My own observations are being checked up by the laboratory findings.

The propriety of draining having been determined upon, the next question is as to the material that should be employed. I have practically abandoned everything else for soft rubber tubing with or without a wick and the so-called cigarette. In wide open wounds gauze is sometimes placed superficially. When it is necessary to pack a bleeding point, gauze may be used to advantage. That portion of the gauze above the bleeding area should be surrounded with rubber tissue, which renders it easier to remove.

In placing drains several essentials should be borne in mind. First, the drain should reach the most dependent portion of the infected area, whether it be the cul-de-sac, the kidney pouch or elsewhere. Secondary abscesses are often best treated by draining per vaginam, occasionally per rectum. When placed in these latter situations gravity aids capillarity. I recently drained such an abscess through the vagina, occurring in a lady eighty-two years of age. Second, it is imperative that drains do not rest against blood vessels. The same is true to a less degree of the bladder and intestines. I lost a patient in my earlier experience from hemorrhage of the iliac vessels due to pressure necrosis caused by the drain. Hemorrhage from the deep epigastrics is often attributable to the same cause. The third item is to begin removing the drains early, usually at the first dressing on the day following the operation. It is good practice to gently loosen the drain and clip off an inch or two daily. The more drains one uses the sooner some of them should be removed.

RESUME.

With the exception of the wider utilization of the oblique incision, the method of checking up the diagnosis after partially opening the abdominal wall, and not draining certain cases, there is nothing especially new in the suggestions herein offered. Their value consists largely in the fact that they have been systematically tried out through many years of handling a rather large number of cases of appendicitis with peritonitis; they therefore carry the endorsement of experience.

Tuesday afternoon, 2.30 o'clock. Odd Fellows Hall. Section on Surgery. Dr. J. Wasley Long Chm., Greensboro, N. C. No. I "The Treatment of Acute Appendicitis with Peritonitis." This paper is my exhibit No. I. Discussion opened by Dr. W. J. Mayo, Rochester, Minn., which was as follows:

Mr. President:

Dr. Long, in his excellent paper, has placed the emphasis at exactly the right point. It is not the appendix of itself which causes the great mortality, but the peritonitis which is set up by the infected appendix that is responsible. The confusion which has arisen and which at times has introduced bitter controversies between members of the profession has been due to the failure to make a clear distinction between these two conditions; the one, speaking of appendicitis, the other, discussing the question of the peritonitis, which is the result of the appendicitis. Dr. Ochsner introduced the so-called starvation method of treating appendicitis and especially peritonitis. The principles that he enunciated were of the greatest possible value and have now been pretty generally accepted, but this has not meant that these patients should not be operated upon. On the contrary, it means that, as soon as proper conditions can be established, we must operate upon every case of appendicitis in order to prevent that complication—peritonitis—which Dr. Long so justly emphasizes. The treatment of peritonitis, no matter what its cause, is one which requires most excellent judgment and wide experience.

Drainage was considered for a long time the *sine qua non* of the treatment of peritonitis. Today we know that the milky fluid which appears in the earlier stages is a defense manifestation and the patient does better if this is not drained away, as Dr. Long has shown in the splendid results obtained since he stopped drainage in this condition; and yet it takes a surgeon of great acumen to know when the stage of defense has passed, when leucocytes have become pus, and the fluid is infected so that drainage becomes necessary.

SCIENTIFIC RESEARCHES INTO THE CAUSES OF
ALCOHOLISM AND INEBRIETY.

BY T. D. CROTHERS, M.D.,
Hartford, Conn.

One great fact has been established by accurate laboratory and clinical research, viz., that the physiological action of alcohol on the cell and tissue is that of an anesthetic and depressant, and not a tonic or stimulant. This has been accepted by the profession generally, and while it revolutionizes the previous theories, explains in some degree why alcohol is so fascinating.

Beyond this, there is a vast range of causes producing alcoholism and inebriety that are practically unknown. All remedial and restorative efforts are based on the theory that alcohol is the special and particular cause of all the degenerations which follow from its use.

Careful studies of individual cases show this to be untrue; also that in many instances alcohol is only a symptom. It may be a complicating drug intensifying unknown conditions that were latent before. It may be a specific poison localizing in certain organs. It is also cumulative, and associated with the most complex neuroses.

The causes that impel men to drink have never been studied scientifically. The literature up to the present is a confusing mass of theories and opinions unverified.

In this unknown region there are innumerable questions like the following: Why are certain periods of life more favorable for the outbreak of the craze for alcohol than others? Why does the desire to drink break out suddenly in diverse conditions, and then subside from causes inadequate to explain the change? What is the explanation of the exact periodicity of these drink excesses that are as certain as the rise and fall of the tide? What are the causes in surroundings and conditions of living that provoke these paroxysms? Why do men drink after injuries, diseases, shocks,

losses, disappointments, business reverses, and great successes in life? What degenerations are transmitted from the parents to the children that create susceptibility or immunity to the effects of alcohol? Why are some persons able to drink in so-called moderation for years, and why do others quickly become diseased and die? Why do some men drink in early life, then abstain, and in middle or later life turn to alcohol again and drink until death? Why are some persons susceptible to the contagion of surroundings and companions, while others are immune? What physical and psychological causes produce the drink craze?

These are some of the unknown causes and conditions which have never been studied with scientific exactness. One of the most prominent and widely accepted explanations is the so-called moral cause. Physical conditions are considered results and not causes.

A Research Foundation has recently been organized at Hartford, Conn., for the purpose of making an exact scientific study of these questions. It will be endowed and become a permanent work. Preliminary studies have already begun, and practicing physicians from all parts of the country are appealed to for the records and histories of cases which will be compiled and tabulated for the purpose of determining the laws which control and govern them.

This is the first scientific effort to take up the subjects of alcoholism and inebriety and determine the causes which produce them outside of alcohol. Science has shown that these conditions are governed by exact physical and psychological laws, which if known and understood would indicate the most practical means and measures of relief.

The Foundation will be practically a laboratory or clearing-house, where persons can come for examination, counsel, and advice. To a large class of persons who want something more than pledges, appeals or sanatorium treatment, this will open a new field of means and measures for relief that will be most welcome.

Correspondence is earnestly solicited from the profession.

Selected Articles

PROPHYLAXIS AND TREATMENT OF ARTERIOSCLEROSIS.*

BY EDWIN W. JAMES, M.D.,
Tacoma, Wash.

If we accept, as indeed we must, the statement that no measures will serve to remove calcareous deposits of fibrous tissue from the walls of blood-vessels, once degeneration has taken place, then prophylactic measures assume their proper perspective and demand recognition during a study of this subject. The whole question of preventive medicine is of absorbing interest and, while at first glance it does not seem to have to do largely with arteriosclerosis, who shall say how far-reaching the effects of blotting out preventable diseases may be upon the incidence of arterial changes. For is it not true that typhoid fever, diphtheria, influenza and other infections are prominent causes? And, if inflammatory rheumatism be a common cause, may we not acknowledge our indebtedness to specialized surgery for preventing in a large measure "rheumatism", and so arteriosclerosis, by removal of diseased tonsils? We believe that the coming generation will, in this respect, as in many other more spectacular ways, reap benefit from the well-directed efforts of our public health workers.

Arteriosclerosis is not a disease entity, but a syndrome, a result. It is apoplexy in its possibility, and Brights disease in its incipency. It is many times as common now as it was a half-century ago and, in spite of the gradual withdrawal of infectious diseases from among the causes, its frequency

*Read before the Twenty-seventh Annual Meeting of Washington State Medical Association, Seattle, Wash., July 12-14, 1916.

will increase unless prophylaxis be given the attention it deserves. The rapid pace we travel, calling as it does for absence rather than presence of physical effort, is telling on this nation, as witness the forced withdrawal from fields of great usefulness of many prematurely broken men. The ancient Romans, as their star came into its ascendancy, were ardent athletes, all able-bodied men, especially soldiers, being participants in games and sports. It is told of the most notable warriors of that time that they never missed a day in carrying out their exercises, and were able to successfully contend with any member of their troupes. And away back in Roman history we find the decline of athletes coming at the same time as the increase of luxury, athletics being then abandoned to the class of professionals, and finally being taken up by paid combatants or gladiators so familiar in literature. Here in America there seems to be a very large class of men who are consuming the food of athletes and taking their exercise by proxy. The massing of humanity into cities, the short distances necessary to go to transact business and the easy means of transportation for either short or long distances are among the things that have to be considered. Time was when it was considered genteel to walk or ride a horse, while now the effort of holding a steering wheel or changing a tire is something to be guarded against.

Prophylaxis, when to begin. If we attempt to prevent arteriosclerosis at the time when the best results may with confidence be expected, we shall look to the care and education of our youths and maidens. A system of athletics which relegates the exercise and sport to a chosen few will not produce a high degree of physical perfection in the mass of students. Wearing a chrysanthemum to a Thanksgiving day football game never equalized a young man's circulation, although cheering may increase his air-space. However, we have not been aware of any deficiency of air-space in Young America.

All young people should be trained in systematic exercise and sports, for two reasons: First, to develop a strong and healthy body, which will resist invasions of pathogenic organisms, by having the right sort of blood, and blood-vessels; second, they should receive this training in order that they may acquire a taste for out-door sports. It is just as important that a man or woman should know how to play as to know how to work. We have had several cases of beginning arterial change with symptoms, when proper living, with some relaxation, would have prevented further development of the trouble and spared the man to years of continued usefulness, but he did not know how to play. He could not relax, and he had no taste for recreation. That we found to be one of the great difficulties in handling these cases. It is hard to teach a man or woman past middle life to play. So, I repeat, we must see to it that our young people acquire a taste for those things which they will need to do in more advanced years.

Without wishing to introduce any discussion of political policy, but strictly from scientific reasons, we would urge compulsory military training in our public schools and colleges. The physical exercises and the taste of camp life tend toward bodily vigor, mental acumen and a fondness for out-door life.

It is, however, in connection with middle age that the prevention of arterial changes is most often considered, and at this time of life we find the greatest degree of bodily insult and abuse. Among the well-to-do there is a growing disposition to consult a physician at more or less regular intervals for a physical examination. This is as it should be, and must be encouraged in every way. The doctor who at these examinations fails to go carefully into the habits and mode of life of his patient is derelict in his duty. One should correct errors of living just as surely as errors of digestion or vision, and charge a fee for so doing, for it is a service of even greater value.

We shall do much to prevent arteriosclerosis by, in no uncertain terms, advising these patients of a proper diet and a necessary amount of exercise. Here in the West, where there is so much of God's out-of-doors, people get away for the right kind of outings more than in the East. Not always, however, the people who most need it. We have seen patients presenting distressing symptoms, whose table was too generous and whose exercise was neglected, who have made spectacular recoveries, not under internal medication, but from regular gymnasium work. Golf or other not too vigorous out-door exercise has helped others equally as much. At the same time their intake of food was curtailed. These were cases of Huchard's "preclerosis" or Von Basch's "latent arteriosclerosis." There is a wonderful field for education in the matter of eating. Witness the lunches which we see consumed at any of our clubs or hotels by men who will ride away to their offices and remain physically inactive the remainder of the day.

Alcohol and tobacco should be reduced, if used to excess, or entirely cut off. It is our opinion, however, that there is far greater harm from the intemperate use of food than from the temperate use of alcohol or tobacco.

Infected tonsils as well as all other foci of infection should be removed, even in the later years of life, as they should in the prophylaxis of many diseases. Acute infections are becoming less common but should be further guarded against, for they all leave their marks in the arteries, even of young children. Syphilis must be cured before patients are allowed to discontinue treatment. Many cases of atheroma will in this way be prevented. Happily the later antisypilitic remedies are very great aids in the cure of the disease, and later laboratory methods make known indications for specific treatment or its discontinuance.

The treatment of arteriosclerosis seems to have been enveloped in something of a haze, which no doubt is due to an endeavor to keep away from symptomatic treatment and empirical practice, both of which have a decided place. Fur-

thermore, it is impossible to be at all comprehensive in a study of treatment without some fairly well defined classification of cases. Sir Clifford Allbut has offered the following suggestion which has been accepted by Sir William Osler and others.

(1) Arteriosclerosis, being the effect of persistently high blood-pressure, Allbut's hyperpiesia, Huchard's precleriosis.

(2) Arteriosclerosis of toxic origin from poisons or disease.

(3) Arteriosclerosis of advancing age, the result of involuntary changes, termed by Allbut, decrescent.

It is in the case of hyperpiesia that treatment offers the greatest encouragement, it being possible many times to achieve recovery. Recovery not by removing deposits from the arteries, but in those fairly early cases, by relieving the conditions which later will cause degenerative changes. There may be more or less serious symptoms causing patients to seek advice, or the condition of hyperpiesia may be recognized at the time of insurance examination or when prescribing for some concurrent ailment.

The treatment of hyperpiesia will depend upon the condition of the patient at the time of observation and the exciting cause. The success or failure of treatment will depend not only upon the time at which treatment is begun but upon the co-operation we receive from the patient and his family. There is probably no condition in which a clear conception of psychology is of greater assistance than here. Discipline is an essential and suggestion an aid. Sometimes, perhaps, we err in disregarding the fact that there are two kinds of suggestion, positive and negative. We give the one intentionally and hopefully. Our patient acquires the other, if we are not on our guard, from our actions, facial expression and nature of our advice. The layman nowadays is pretty well posted in blood-pressure, hardening of the arteries, threatened apoplexy, etc. (or let us say he thinks he is), and it is very easy to launch him on a debauch of sordid self-examination and introspection, by awakening apprehensions

through too great diligence in examinations and the imposing of too many restrictions.

Have we not sufficient evidence that blood - pressure is raised by worry and nervousness? We have seen a man of fair robustness reduced to semi-invalidism by being told daily for a short time of his blood-pressure which registered about 200. Just as an X-ray plate in the hands of a patient may be a source of great concern, so the knowledge of his blood pressure may be a source of great worry. Both should be kept in the physician's hands. Blood-pressure should not be taken more frequently than the exigencies of a case demand.

A very bad effect will also usually follow the advice to a patient who is still fairly active that he stop all work and responsibility in connection with his business. The reaction will be worse than the continuance in more or less moderation. However, restrictions must be placed and modes of life changed but the very radical changes can be brought about gradually in the mild cases. Having inspired a patient with confidence, instead of apprehension, we are in position to outline treatment for him with fair prospects of success.

Hyperpiesia of children is usually from gastro-intestinal disorders and restriction of diet, followed by the administration of mercury, proves sufficient ordinarily. In treating hyperpiesia of adults the first consideration is that of diet and exercise. We say diet and exercise, believing it impossible to consider either separately. Most men are burning too rich a mixture. Food values must be reduced to terms of muscular exertion. If these people who are so fond of eating would take sufficient exercise to burn up the fuel, the unfortunate results would not follow. And so, while the question of diet is the most important, it must be handled with due consideration to exercise. We believe it is far better to insist on exercise up to the point of safety, with a less restricted diet, than to tolerate inactivity on the low diet.

The exercises which should be prescribed for a man of fifty, with a systolic blood-pressure of say 160 and diastolic 90, whose heart is slightly enlarged to the left, and who has no symptoms of myocardial insufficiency but is in fairly good condition otherwise, would be those which do not require any sudden or violent exertion. Golf, horse-back riding, walking and graded hill climbing. The English use hill climbing for its therapeutic value much more than we do, and it has been dubbed by them "the terrain cure for rising blood-pressure." Hill climbing should be undertaken gradually at first, for during the first few minutes both systolic and diastolic pressure rise. Then comes one's "second-wind," due to an increase in the lumen of the arteries and consequent relief of the circulation. Exercise is of value in even more advanced cases after the heart has regained compensation.

The question of diet presents many difficulties. It must be reduced to meet necessary requirements, which usually means deprivation to the patient who, during middle age and inactivity, has been eating about the same as he was at the age of strenuous youth. Reduction to about one-half often gives splendid results. It is generally not necessary to adopt an exclusive diet, rather can we expect better results from a temperate amount of a general diet, at the same time avoiding what we might term the notoriously harmful foods. Meat only in small amounts two or three times a week, no hot cakes or hot breads; no fried food, no pastry, no highly seasoned food and little salt. Much has been written about purin-free diets but clinically we have found no advantage in it. While Brault states that, inasmuch as atheroma is found in the herbivora a vegetable diet is dangerous. Huchard says that meat is a poison to the hyperpietic.

The intake of fluids should be reduced in some cases. Much harm is being done nowadays by the advertisements in the press, urging the universal drinking of large amounts of water, always, of course, adding some patent medicine in the guise of a harmless cure. In this way they say we may

“wash out the system” or take an “internal bath.” Any excess in the use of alcoholic drinks or tobacco should be foresworn. Life for these patients must be made to run smoothly, avoiding as much as possible mental excitement and worry, while not going to the extreme of forbidding all endeavor and responsibility.

The only electrical treatment which seems to be of value is the high frequency current. One thousand milliamperes should be given for fifteen to twenty minutes. The systolic pressure is often reduced noticeably and remains down for from several hours to two or three days. It is a measure of some usefulness in cases in which high pressure is the cardinal symptom, particularly in nervous people. It acts as a nerve sedative and probably reduces peripheral resistance. Some have claimed that its only good effect is through suggestion. Granting that it is a help in this way, there seems to be plenty of evidence that it does more.

In more advanced cases, with failure of cardiac compensation as evidenced by dyspnea, edema, and a murmur at the base of the heart, the treatment becomes more active. Such patients must have rest in bed until the heart is able to regain its muscular tone. Digitalis here becomes our drug of choice, administered now as *digipuratum*. In case the situation is threatening, it is best given intravenously, one dose of one and one-half grains, repeated in twenty-four hours if necessary. Ordinarily, however, it may be given by mouth, one and one-half grains three times a day for three days, then one-half the dose. We have given this latter dose continuously for months, with only occasional periods of two or three days without it, with no untoward effect, but on the contrary continued improvement.

If there be much edema and rest, diet, cathartics and digitalis do not give relief, we have tried *apocynum cannabinum* with quite remarkable results in some cases. A fresh tincture is procured and fifteen drops given three times a day, increasing one drop to each dose a day until therapeutic

limit is reached. The mechanical removal of fluid may be necessary. Such indeed is indicated if there be anasarca.

Those cases of myocardial insufficiency due to the strain of hypertension with, perhaps, coronary sclerosis, offer a great deal of encouragement from treatment. These patients have kidney involvement but it is secondary. Primary kidney cases do not respond so well to treatment.

Vasodilators are sometimes of value in reducing high pressure. To be sure, it is symptomatic treatment, but why not? A vicious circle may be broken by improvement of a symptom. The nitrites may be used for relief of high pressures, not, however, if the heart shows signs of yielding. If used, it should be in increasing doses and with watchfulness. An occasional course of calomel or blue mass is usually indicated. The use of iodides in other than syphilitic cases is used empirically and with good effect, its favorable action probably being due to a decrease in the viscosity of the blood. This latter is also effected by the use of mineral waters, baths, and purgatives.

Venesection is a remedy very useful in two ways; first, as a part of our treatment in cases of hyperpiesia in robust, plethoric individuals, even in the absence of an emergency; second, as a relief in a crisis. We have used it in both classes to our satisfaction generally. When used to relieve the ordinary symptoms of high pressure in properly selected cases, it is resorted to about twice a year. Following the withdrawal of a pint to a pint and one-half of blood, the patient experiences considerable relief. The blood-pressure drops and may remain at a lower level for several months. It is gratifying to have a patient return in, say, six months for another venesection with the voluntary statement that she has been so much better but feels that it is time to repeat it. Patients who have experienced this relief look forward to the treatment with confidence. In crises like threatening cerebral hemorrhage the results of blood-letting are very encouraging. In choosing cases for venesection we should have clearly before us the classification of arteriosclerosis,

for, while it is a measure of considerable value in the hyper-pietic form, it is scarcely applicable to the decrescent cases. In fact, the results in the latter class might be disastrous, as also in cases anemic from chronic nephritis.

In toxic arteriosclerosis the blood-pressure is not raised, so depressor remedies are not needed. The treatment is that of the particular poison or infection concerned. Syphilis is the most common infection and a discussion of its treatment could not be undertaken in a paper of this scope. With the present improved remedies at hand and the improved laboratory methods of accuracy in diagnosis, cases of syphilis will generally be cured before sclerosed or atheromatous blood-vessels require treatment. For the toxic forms we may say that rest, massage, baths, diuretics and cathartics will be the remedies used.

We have tried to show that much can be accomplished in the treatment of arteriosclerosis due to hyperpiesia by treating the high blood-pressure to which it owes its origin. Unfortunately, in decrescent arteriosclerosis we can not anticipate any such fortunate results of treatment. It is to this form we refer when we say "a man is as old as his arteries" and, as we can not subtract years from his age, we can not extract calcareous deposits from his arteries. We may watch and wait, lending a hand here and there, but the result is inevitable. We dare not interfere with a moderate rise of blood-pressure, for it is compensatory. The arteries are less resilient and there is more friction, consequently the heart's action increases in force to overcome the odds.

Just a word in regard to indications for treatment, furnished by blood-pressure readings. Diastolic as well as systolic blood-pressure should be taken and the pulse pressure estimated. The probabilities of loss of cardiac compensation increase in pulse-pressure.

Consequently, a high pulse-pressure is a contraindication for the use of depressant measures. On the other hand, it is a positive indication for guarding the heart muscle and the use of a drug of the digitalis group. In high

blood-pressure cases, if the pulse-pressure be low, that is, if the diastolic pressure be comparatively high, cerebral hemorrhage is to be feared and sudden muscular effort might be fatal. Depressants or venesection in such cases may be indicated, although all measures for immediately lowering blood-pressure should be used very guardedly. It is a grave error to assume that every high blood-pressure (systolic) should be promptly reduced. They are frequently compensatory and disastrous results may follow this reduction.—*Northwest Medicine.*

ADMINISTRATION OF DIPHTHERIA ANTITOXIN— SAFETY FIRST.

BY LOUIS WEISS, M.D.

The use of the hypodermic needle is an important procedure. It should be prepared for and carried out with infinite care. The history should be ascertained. Did the patient have a hypodermic injection of antitoxin before? How long ago and how many times? What was the effect? Did the patient ever have any severe illness?

The present condition of the patient should be carefully noted. Is it a mild or severe case; a child or an adult; how long ill; and complications? Make a physical examination. The heart, in hypodermic therapy, is the most important organ to consider. The heart, through the pulse, is the key to the safe administration of antitoxin. What is the character of the pulse? Is it rapid, slow, irregular, weak? What is the blood pressure? Note the face, is it pale or florid? Are the extremities, hands, and feet, cold and clammy with perspiration, or hot and dry? What is the temperature—rectal preferred? What is the extent of the throat infection? Are the adjacent glands involved? Having ascertained all the information possible, one is prepared for more efficient service.

The administration of antitoxin should always be made with the patient in the recumbent position. At any age, position is important. The work of the heart is light with the body level. It is the position of rest for the heart as well as the body. As long as the heart does not have to pump the blood against gravity, it is at its maximum strength. With a strong heart bodily resistance is enhanced.

In the case of a combative child, have it held, so that your own hands are free. You may use the subcutaneous, the intramuscular, or the intravenous route. The essentials of the technic are the same in all. Personally I use the subcutaneous route. It is especially suitable in children and the obese. I most frequently use the abdominal subcutaneous tissues as the site for antitoxin injection in children. Other sites are probably equally as good. In the adult the arm is most frequently used. Cleanse the part selected with ordinary hand soap, or tincture green soap or lysol in solution, and paint with tincture iodine. Cleanse your own hands every time. The antitoxin outfit comes to you sterilized. Pinching up the skin, introduce the needle through the iodine-stained area. With the syringe in one hand ready for action, watch the pulse with the fingers of the other hand. In the case of children, if the pulse is difficult to get, use the stethoscope on the heart. Inject drop-by-drop, slowly and carefully. Watch the heart through the pulse, or directly by means of the stethoscope. Is it the same or better, or worse? If the same or better, continue the injection until finished. If worse, remove the needle at once, regardless of the amount previously determined upon for injection. What constitutes worse? Any further tendency from the normal. The pulse may suddenly increase in rapidity or may become excessively slow, irregular or dicrotic. The pulse shows on the first sign of danger. Detection is easy if looked for. If the pulse is overlooked and the injection continued, other symptoms follow. There is a temporary stoppage of respiration and a blank stare, an anemic, shrunken face, beads of cold perspiration on the forehead, dropping of the arms, and head

to one side, and collapse with the patient at your feet unconscious. What physician has not gone through one or more such frightful never-to-be-forgotten moments? Such an experience need never be repeated if the slow, careful, watchful, drop-by-drop method is cautiously followed, and the patient placed in the recumbent position. The studied method is the truly scientific one, and not the rapid, hit or miss, want-to-be-through-with method.

With this method, patients do not complain of the severe pain, as with the old method.

The occasional necrosis at the site of injection with the rapid method, is a thing of the past with the slow method. No swelling is produced because the fluid is injectly slowly. The usual rapid injection compels the subcutaneous tissues to admit the fluid under pressure. There results a forceful separation of cells, a squeezing, a tearing, a pushing of structures. Such an onslaught has a tendency to cause tissues to become pathologic, as manifested by swelling, redness, pain, extreme tenderness, and sometimes ending in necrosis.

The slow injection permits the tissues to accommodate themselves to the invader. There is no harm done to the structures. The slow injection has a physiologic effect which is desirable. Every drop is taken care of separately. It is easy for the parts to withstand the invasion of one drop at a time. The rapid introduction of a large amount of fluid overwhelms the receiving elements, and instead of being a help, it becomes a menace in already weakened individuals, in whom the antibodies may be a negative constituent.

Look for effect *immediately* with the very first drop entering the system. It is not generally acknowledged that every drop makes an impression on the system. We do not usually consider the fluid, only the bacteria, so many millions per c.c. It is believed that the millions of antitoxins introduced are the principal destroyers of the toxins in the patient's blood. We have counted the antitoxins from outside the body; we know their number; but who will ever know how

many antitoxins are at work, or ready to be set free for an attack on the toxins in the body?

It is a fact, established beyond all doubt, however, that antitoxin injected through the skin is of immeasurable value in diphtheria. But do we know in what way this benefit is conferred? My belief is, that the antitoxin fluid injected into the system acts as a stimulant. It stimulates the *body's antitoxins*, and *they* are the real curative agents.

In the comparatively robust, who are filled with antitoxins, there is usually a favorable response to the outside stimulation. But the introduction of anti-toxins into a body devoid of its own antibodies, is sometimes a failure. Not only does the system fail to respond, but serious consequences may follow over-stimulation. Over-stimulation is not alone detrimental to the weak and sick, but likewise to the seemingly well, with an anaphylactic or hypodermic idiosyncrasy.

Every physician is undoubtedly familiar with cases, who apparently were in good health, and when given an immunizing dose, which is usually smaller than the therapeutic dose of diphtheria antitoxin, were made ill. Some recovered with considerable difficulty; others lost their previous robustness, while some even died.

These deaths are usually ascribed to a weak heart which was never before manifest. It is a poor way to bring out a latent weakness of the heart. At any rate it is a fact, that the heart is easily affected by a hypodermic injection of diphtheria antitoxin.

Let me here note that injections with vaccines thus far have been comparatively safe. We do not hear of anaphylaxis following vaccine injections. We may hear of a negative phase occasionally, which means a slight unfavorable reaction which passes off usually in from a few hours to a day or two. Why this difference? Because vaccines are used in small amounts at a time, from a few drops to one c.c., seldom more. And used slowly, carefully, with an eye to the negative phase. The element of danger in the case of vaccines is never lost sight of. That should also obtain with

injections of diphtheria antitoxin. The vaccine injections are graded. They are increased only as toleration for them in the patient is established.

Most of us believe that vaccines play an important role in the cure of patients, and yet the benefits are brought about by small amounts. Vaccine therapy shows that every drop has its effect upon the system. This argues well for the concentration of as many bacteria as desired in the drop of fluid for therapeutic purposes. As a matter of fact, there has been obtainable for some time a concentrated diphtheria antitoxin. I believe this is the diphtheria antitoxin of the future. It is safer for the patient, and is equally efficient to the bulky antitoxin, usually 10 c.c., mostly serum. With the elimination of at least nine-tenths of the serum will go the dreaded serum sickness and other untoward effects, and mortality will be still further reduced.

The effect of the hypodermic injection, as was pointed out, is *immediate*, at the very start of the injection. It is not a case of mere absorption, however. The body is not a sponge. Immediately on the introduction of the first drop of antitoxin, the body acts as if it were electrified—that is, unconsciously. The histologic elements of the body experience a change.

The injection creates in the organism a process by means of which abnormal states tend to become normal.

The effect being immediate, the system at once responds according to its ability to tolerate the injection. That is determined, as noted above, first by watching the heart through the pulse. If the pulse is unaltered or improves, the power of resistance to disease is sufficient. That is, the patient is capable of overcoming the disease by his or her own antitoxins. Here we have a case which requires little if any outside stimulation. At any rate it is a safe case for the administration of diphtheria antitoxin.

If the pulse becomes worse, it is a sign that the patient's power to resist disease is low. This kind of a case is hazardous and requires extreme caution in introducing antitoxin

into the system, although apparently antitoxin is urgently indicated.

This method gives us immediately knowledge as to the condition of the patient in hand, and indicates the probable prognosis of the case. By this method also we may safely determine at once, by proper interpretation of the effect of the injection, the degree of immunity to diphtheria present in a person exposed to the disease.

Whether diphtheria antitoxin is injected as an immunizing dose or therapeutically, whether early or late in disease, in a mild or severe case, in a child or an adult, once or repeatedly, this method is both sane and safe.—*Medical Review of Reviews.*

Extracts from Home and Foreign Journals

SURGICAL

A SIMPLE DEVICE FOR LOCATING FOREIGN BODIES IN FINGERS.

Location in a busy clothing manufacturing district gave rise to the necessity for a simple method of determining the presence and location of foreign bodies, such as needles and splinters, in fingers. A piece of black woolen cloth 8 inches square was fastened to a piece of adhesive plaster of equal size, and in the center an oval opening was made measuring five-eighths by one-half inch. By placing this over an electric light supplied with a reflector and placing the finger over the hole, excellent transillumination is obtained, and by making pressure with a pointed instrument over the suspected area, the object can be brought out more clearly. If the field is rendered bloodless while operating, the finger may be placed over the opening and the object can be again accurately located. This device is simple, inexpensive and indestructible. It is more easily adapted than pocket flashlights, etc., to the finger, and reduces to a minimum the number of cases requiring roentgenograms. Daily use for the past six months by several workers in the accident room has proved its efficiency.—*The Journal of The American Medical Association.*

CHOLECYSTECTOMY.

Surgical opinion as to certain points in regard to cholecystectomy has been collected by Donald Guthrie, Sayre, Pa. (Journal A. M. A., August 26, 1916). Letters were sent out to forty-five experienced abdominal surgeons asking for the percentage of recurrences following the operation, the rela-

tive frequency now and in the past of its performance by them, and the results as compared with those treated by simple drainage; also in what cases they considered cholecystectomy the operation of choice and what its contraindications; as a rule, how they treated empyema of the gall-bladder, and how the mortality of cholecystectomy compares with that of cholecystostomy in their work. The details of the answers received are given, and Guthrie finds that their reports altogether show that recurrences happen in 9.5 per cent of cholecystostomy, while the percentage following cholecystectomy was not learned, but is certainly small. Cholecystectomy is done much more frequently than in the past, and is a better operation; but it is attended with more operative difficulties and more danger than simple drainings. The gall-bladder should be removed when its wall is diseased or the patency of the cystic duct is in question, provided the patient's condition allows.—*Northwest Medicine*.

MAGNESIUM SULPHATE LOTION IN CELLULITIS.

In the *British Medical Journal* of April 1, 1916, Morison writes that Lieut. S. A. B. Paymaster has drawn attention to the above in the *British Medical Journal* of March 11th. His findings corroborate those published by Dr. Tulloch and himself on the treatment of all septic wounds by this salt. The treatment of erysipelas by magnesium sulphate is of very old standing, and is mentioned in several text-books on surgery published before the dawn of the Listerian era of antiseptic surgery. It was, of course, at that time used empirically; now we know as a result of the researches of Dr. Tulloch that its action is due not only to its hypertonic action on the tissues, but to the power it possesses of inhibiting the growth of streptococci and most of the granulated-negative forms of bacilli found in wounds. He would, however, suggest that the effect of the treatment is very much hastened and more efficacious, and the change of dressing is less frequently required, if a saturated solution of magne-

sium sulphate with 10 per cent glycerin is employed. This he has found by numerous experiments gives the best results in septic wounds and infective conditions.—*The Therapeutic Gazette*.

SURGICAL TREATMENT OF ACUTE EPIDIDYMITIS.

Dr. C. M. McKenna (*Urolog. and Cutan. Rev.*, June, 1916) says that surgical procedure is necessary only when the patient is suffering excruciating pain. When this procedure is carried out, it is quite necessary to divide the fasciæ so as to free the tension from the testicle as well as the epididymis. Patients are less apt to be impotent if the posterior wall is divided carefully and the pus drained off than if it is left to nature to absorb. A blind stab operation is that of a faker and should not be considered. It is not enough to expose the epididymis and drain it, but all the fasciæ should be free. It is not necessary to split the entire epididymis, but only the infected chamber, which stands out clearly.—*International Journal of Surgery*.

MEDICAL

THE SUPRARENALS AND THE THYROIDS.

Suggestions of possible interrelations among the ductless glands have not been lacking in recent years. Various functional changes in the body have been explained by assumptions of more or less complex pluriglandular activities resulting in the promotion or the retardation of the performance in question in accord with the relative participation of the different endocrine structures concerned in the hypotheses. Attention was recently directed to the accumulated evidence pointing toward a definite influence of sympathetic impulses over thyroid activity. It is known that the internal secretion of the suprarenal glands, or epinephrin, will have

the same effect in the body as sympathetic impulses. . Cannon and Cattell have recently demonstrated that injection of a small dose of epinephrin evokes a marked action current in the thyroid gland. This is taken by them, in harmony with observations on the behavior of glands when tested by the electrical method, as a sign of glandular functioning. Stimulation of the nerve to the suprarenal gland so as to cause its secretion to be poured forth into the blood stream will also evoke a characteristic electrical change in the thyroid. This electrical change does not occur if the return of blood from the abdomen is prevented, but takes place promptly when the pent blood is released. Furthermore, it fails to appear after stimulation of the nerves if the suprarenal glands have been removed previously. An influence of suprarenal secretion on thyroid activity seems thus to be definitely established. Cannon and Cattell point out that apparently the amount of suprarenal secretion liberated by the splanchnic stimulation is sufficient to excite the thyroid gland in a manner similar to its excitation by sympathetic impulses and by epinephrin injections. They add that obviously the efficiency of sympathetic impulses in provoking activity of the thyroid might be greatly augmented by the simultaneous secretion of the suprarenal glands. It is regarded as significant that both the thyroids and the suprarenals would be stimulated simultaneously by the diffusely stimulated pulses of sympathetic neurons. Attention has been called to the emergency function of the suprarenal glands in times of emotional stress, as distinguished from a purely routine function. There is doubtless what may be called a routine performance of the thyroid which serves to keep metabolism normal in some of its aspects. But because this gland is subject to sympathetic impulses and because it is now demonstrated to respond to such stimulation with great promptness, Cannon ventures the belief that it also has an emergency function—one that is exercised particularly in emotional crises. That this behavior is an exaggerated form of the routine activity of the gland is at present,

of course, purely a speculation.—*The Journal of the American Medical Association.*

THE USE OF EMETINE.

Alfred C. Reed presents the salient features of the history, pharmacology, toxicology, and use of emetine, and, in summarizing, states that in so far as emetine has a beneficial action in tuberculosis, it would seem to be due to its expectorant properties, and if so, other preparations are preferable. In so far as emetine has a beneficial action in hemorrhage, it would seem to be due to the indirect result of decreasing the blood pressure, and if so, other drugs would be more effective, in that they would produce a similar result more safely and without the specific action of emetine on coagulation. Levy and Rountree make the suggestion which can hardly be taken seriously from the clinical point of view, that emetine enemata would serve a useful purpose in the treatment of constipation. Such enemata have an undoubted value when properly used for the sake of their amebicidal action, but their use as here suggested does not seem well advised. Emetine will hardly replace Leonard Rogers' hypertonic infusion in Asiatic cholera, and few of its other applications will bear the best of careful experimentation. Whether emetine alone will cure pyorrhea is an open question. It will, without doubt, cure the amebic infection, and to this end its use hypodermically and locally is indicated. But it can not be said that emetine is a specific for pyorrhea, or that pyorrhea can not be cured without it. This statement is also applicable to certain bony and oral abscesses and infections other than pyorrhea. Emetine has proved serviceable in the treatment of certain other diseases caused by animal parasites, especially protozoans, but its main action is on the ameba, for which it is a specific remedy, provided the specific agent is not walled off in an abscess.—*Medical Record.*

NOVOCAIN NOT UNDER HARRISON ACT.

Novocain, a synthetic chemical, was recently determined by a jury in a United States Court to be without the prohibitory provisions of the Harrison Anti-Narcotic Law in that it was not a derivative or compound of opium or cocoa leaves. It is a local anesthetic extensively used by physicians and dentists, and is imported and dispensed in the United States to professional men by the Farbwerke-Hoechst Company. Under a ruling of the Treasury Department that any synthetic substitute for cocaine was taxable under the Harrison Act, the Farbwerke-Hoechst Company paid, under protest, the tax to the Collector of Internal Revenue and brought action for the recovery of same, in order to demonstrate that novocain, holocain, orthoform, and anesthesin were not derivatives of cocoa leaves or opium, and contained no habit-forming drugs.—*New Orleans Med. and Surg. Jour.*

OBSTETRICAL

THE FALLOPIAN TUBES IN PUERPERAL FEVER.

Chassot has been making a special study of the part played by the tubes in the spread of the infectious process in nine cases of puerperal fever with necropsy. He cut sections at the isthmus, at the opening into the uterus, and at the farther end. The clinical course in each case is described and compared with the microscopic findings in the tubes. Nothing was found to indicate that the tubes have much to do with the spread of the infection. In only one case was there an old catarrhal infection that might possibly have been the cause of the uterine infection. In one other case there was pyosalpinx presumably secondary to the ulceration in the uterus. In three cases and in one tube in a fourth case the tubes were apparently entire normal. In the five others there was a slight, only microscopic catarrhal trouble. This nonin-

volvement of the tubes shows that pyosalpinx can not be referred to an old pregnancy as often as is generally assumed at present. We must remember also that the streptococci set up acute processes as a rule, while gonococci are more the agents of chronic catarrhal conditions.—*The Journal of the American Medical Association.*

COLLOIDAL SILVER AND PUERPERAL SEPSIS.

Willette sums up as follows: Colloidal therapy should be used intravenously in puerperal sepsis and may render great services. Aerobic infection (chiefly the streptococcus) is much more frequent and more amenable to colloidal therapy. Anaerobic and mixed infections require an oxidizing or mixed treatment. To attain success large dosage should be used—one should not fear possible ill consequences. Figures show that this treatment lowers the mortality, shortens the course of the disease and prevents a certain amount of complications. The rationale of the treatment is due chiefly to the entrance into the blood of matter in the colloidal state which behaves as an alterative, and brings about a crisis syndrome, with its temperature fall, leucocytosis, augmentation of urine.—*Medical Record.*

BACTERIN TREATMENT OF ECLAMPSIA.

Lately I have used bacterin-therapy in puerperal eclampsia, with marked success. The baby was born at 12 midnight, and at 1 o'clock, just as I was leaving, I was called back and found the mother in convulsions. I gave veratrine hydrochloride, to slow the pulse, and repeated it in each attack, which came on every three hours. But, as they continued in to the second day, I became alarmed and gave her a mixed bacterin of 100,000,000 colon-bacillus and 50,000,-each of streptococcus, pneumococcus and straphylococcus au-

reus, albus and citreus. After the second injection, given twelve hours after the first, the convulsions ceased to appear. I do not know which did the work, but I presume the colon-bacillus was at the root of the evil.

This may be a hint worth trying, for at least it will do no harm. — N. W. D. Cox, Arlington, Mo., in the *American Journal of Clinical Medicine*, July, 1916.

SUPERFOETATION.

A 12-para negress in 1900 stated that she had menstruated twice after she was sure she was pregnant. A seven-month male foetus weighing 5 pounds and a nine-month foetus apparently fully matured were delivered at one labor. Both were "raised" and are alive at present, with about 20 pounds difference in weight.—Onslow Regan, Alexander City, Ala., *Medical World*, August.

Editorial

PUBLISHER'S NOTICE—The Journal is published in monthly numbers of 48 pages at \$1.00 a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money order, draft, or registered letter, should be addressed to the Business manager, C. S. Briggs, M. D. corner Summer and Union Streets, Nashville, Tenn.

All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

HAY FEVER RESORTS.

My excuse for writing on so trite a subject is my wide range of experience and observation. Having suffered from hyperesthetic rhinitis for ten years, I have tried a number of resorts with varying results. Petosky was my first experience, and was good. The other Michigan resorts north of Petosky were also good. Muskoka Lake gave relief, but not that region between Detroit and Toronto. The Lake Superior region was good, especially the Nippigon country. Minnesota points was fair, but not Duluth. Lakes of the Woods were good and deserving of more visitors, yet rather inaccessible. Rochester, Minn., is not exempt, and some districts is felt all along the valley of the Red River of the north up to Winnipeg. The Rocky Mountain range and the Pacific Coast were exempt from the Mexican border to White Horse Pass in Alaska in my experience, and of course would have been to the Pole, had I gone that far. Traveling extensively in Europe, Asia, and Africa, and in Australia, Hawaiian Islands, and Samoan Islands, I felt no hay fever at all. I have felt the hyperesthetic rhinitis severely in some of the alkali deserts of the west of America. This season I determined to try the hay fever resorts of the South. Having heard of an old well-known hay fever resort at Roan Mountain, Tenn., I repaired there and found all claims substan-

tiated. Village three thousand feet elevation, mountain six thousand; old-fashioned comfortable place; also relief at near by-stations of Elk Park and Cranberry just over the North Carolina line. Asheville I found comfortable, but Waynesville, nearby, quite uncomfortable.

Reason, Asheville cuts out her weeds, Waynesville does not. Eagles Nest five miles distant afforded relief on account of its elevation, and Mt. Mitchell and Balsam. These points are all near Asheville. I found that on going further south the corn became worse and the cotton better, rag weeds scarcer, also hay fever.

I visited all the important seaside resorts along the coast of South Carolina, Georgia, and Florida. I not only found some of the most beautiful beaches I had ever seen, but also fine bathing and freedom from hay fever. Every seaport has an island out in front which is an ideal hay fever resort. A trip by boat into the everglades of Florida proved not only interesting, but also that they were free from hay fever. Crossing over to Cuba that was also found to be free from hay fever and Havana free from mosquitos, while Floridians are nearly eaten up with them. I have always found the tropics free from hay fever.

I hope to have given some people a change from the monotony of visiting the same resort year after year where others may find a place of relief nearer home and some northerners may find the delights of the Southern climate and people. I found that generally speaking five hundred miles from Cincinnati brought peace.

HEALTH NEWS.

What profiteth a man that he gain the whole world yet lose his health?

Naturalists say that long ago the prehistoric waters were infested with a species of enormous shark which finally became extinct by reason of the workings of its voracious appetite. Thus Nature eliminates the over-fed.

The desire for ease of life and plentiful diet is universal and is the great stimulus of man and animal alike. When man becomes greedy and takes more ease and food and drink than is his share, Nature discards him.

In the race for power and place, for ease of circumstance and relief from the stimulus of hunger, the modern man is apt to forget that unless he is careful of his body he will soon be made to suffer for the infraction of Nature's inexorable physical law. With the loss in body tone comes an equal loss in mental acuity and the brain which for a time was able to operate despite the complaints of an over-fed, under-exercised, self-poised body, stops working.

Statisticians have discovered that the mortality rate of persons in the United States over 45 years of age is increasing. The strenuous life of today is not alone responsible for this. Lack of health-giving exercise, superfluity of diet, lack of restoring sleep, over-stimulation, the high pressure of the race for power, wealth, and position, plus physical neglect—these bring early decay. The goal is reached—wealth is amassed—honor, position and power are just being grasped when the apple of accomplishment turns to the ashes of dissolution. The brilliant mind becomes clouded, the steady hand is no longer accurate, the eye which once gazed fearlessly on the whole world is dimmed and it is not long before the final break-up occurs. All of this was entirely preventable.

Other things being equal it is the man who leads the well-balanced life who lasts the longest, whose work to the end is uniformly the best, he who neither over-works nor over-plays, neither over-eats, over-drinks, nor over-sleeps, he who maintains a standard of simple healthy diet in moderation, who offsets mental work with physical recreation, who is as honest with his own body as he is with his own business. When success comes to such an one his physical and mental condition is such that he can enjoy in peace of mind and contentment of body the fruits of his labors.

The regulations of U. S. Public Health Service state: "It is the duty of officers to maintain their physical as well as their professional fitness. To this end they shall be allowed time for recreation and study whenever their official duties will permit." If the Government regards it as essential that its sanitary experts shall be safeguarded in this way, is it not equally important to every citizen that he similarly maintain a high standard of physical integrity?

MEDICAL CARE OF THE NATIVE ALASKAN.

The problem of caring for the natives of Alaska is among the most difficult matters which confront the government in its relations with the aboriginal tribes.

There is no central point in Alaska, Seattle being the trading centre of the Territory.

These people are scattered along a waterfront of more than 5,000 miles. They live in small villages. They are still influenced by the superstitions which have come down to them from the centuries. They hide, rather than seek relief for their ailments, believing that there is some divine retribution in misfortune.

Secretary Lane of the Interior Department, who personally knows every part of Alaska, has given tender consideration to the needs of the native Alaskan, and great improvement has taken place in the care of these people, especially during the past two years.

Syphilis and tuberculosis, here as elsewhere, have wrought sad havoc with the primitive people.

The editor of the *Medical Sentinel*, in a trip just completed in Alaska, was forcibly impressed by the special interest now being shown by the Government in the medical side of care for the natives.

At Juneau, Dr. Douglas Brown, a recent arrival, is in charge of a splendid native hospital just completed by the

Interior Department, which looks after fourteen nearby villages. Dr. Brown serves under the Educational Division of the Interior Department, is a civil service employe and was for some years with Col. Gorgas on the Panama Zone.

At Haines a special hospital is soon to be erected for tubercular cases, and soon a colony with every known equipment will be in operation.

In other portions of Alaska, seven or eight physicians have been put in charge of the medical Indian service, and three other small native hospitals are already maintained by the Government in the territory.

An attempt is now being made by Secretary Lane to employ teachers in the Educational Division, for stations where no doctors are located, who are also trained nurses. These teachers have some special training for emergency medical work, are given a medical and surgical equipment of simple character, and provided with proper instructions for the service along medical lines. As fast as appropriations can be secured, district zones are being organized comprising a neighborhood of native villages, for which a general hospital and a competent physician is supplied.

The insane native has the benefit of care outside of Alaska, where, in a milder climate, the percentage of recoveries is very large. The tubercular insane live in a separate department, at Portland, Oregon, where they enjoy every qualification for modern treatment.

The Educational Department in these more recent departures, seeks, among other things, to educate the natives as to the prevention of tubercular infection. Also as to the dangers of syphilis, its possible cure under appropriate treatment, thereby effecting the lowest possible evil to the living, as well as to the unborn progeny of the native races of Alaska.—*Medical Sentinel*.

DO YOU KNOW THAT

It is dangerous to put anything into the mouth except food and drink?

Sanitary instruction is even more important than sanitary legislation?

The U. S. Public Health Service issues free bulletins on tuberculosis?

The continuous liberal use of alcoholic beverages lowers efficiency and menaces longevity?

Moderate exercise in the open air prolongs life?

"Mouth breathing" makes children stupid?

Fish can not live in foul water nor man in four air?

Smallpox is wholly preventable?

The Constitution of the United States doesn't mention health?

Procrastination in sanitary reform is the thief of health?

A book on "Exercise and Health" may be had free for the asking from the U. S. Public Health Service?

Not everybody can achieve greatness but everybody can be clean?

If you sow a hygienic habit you reap health—reap health and you attain longevity?

Railway cars would be sanitary if it weren't for the people in them?

America's typhoid fever bill is more than \$270,000,000 a year?

The full dinner pail is the enemy of tuberculosis?

Reviews and Book Notices

Practical Massage and Corrective Exercises—By Hartvig Nissen, President of Posse Normal School of Gymnastics; Superintendent of Hospital Clinics in Massage and Medical Gymnastics; For Twenty-four years Lecturer and Instructor of Massage and Swedish Gymnastics at Harvard University Summer School; Late Director of Physical Training at Boston and Brookline Public Schools; Former Instructor of Physical Training at Johns Hopkins University and Wellesley College; Former Director of the Swedish Health Institute, Washington, D. C., etc.; author of "Swedish Movements and Massage Treatment," "Practical Massage in Twenty Lessons," "A. B. C. of Swedish Educational Gymnastics," "Rational Home Gymnastics," etc. Revised and Enlarged Edition of the Author's "Practical Massage in Twenty Lessons," with many additions. With 68 Original Illustrations, Including Several Full-page Half-tone Plates. Philadelphia. F. A. Davis Company, Publishers, English Depot, Stanley Phillips, London, 1916.

This will prove an instructive book to physicians and to nurses. Massage successfully employed occupies an important place in the physicians armamentarium and as a therapeutic agent it is of the greatest adjuvant value in the treatment of diseases. The author's long experience in the practice and study of the art has enabled him to make up a handbook of directions for its practice of the utmost value to its readers. We can conscientiously recommend the work as one of the best recently published.

Progressive Medicine—A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics, Materia Medica, and Diagnosis in the Jefferson Medical College, Philadelphia; assisted by Leighton F. Appleman, M.D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia, September 1, 1916. Owners and Publishers, Lea and Febiger, Philadelphia and New York. Vol. XIX, No. 3.

We acknowledge with thanks to the obliging publishers the receipt of this excellent quarterly publication. Progress-

sive medicine is in a class by itself, in that it is the only publication devoted exclusively to an exposition of progress and advances made in all departments of medicine and surgery. We know of no other publication that puts in easy reach of the general practitioner every discovery and improvement almost as soon as made. The list of contributors comprise the names of some of the best known writers in the profession. The contents of Vol. III, with the contributors, are as follows: "Diseases of the Thorax and Viscera, including the Heart, Lungs, and Blood Vessels," by William Ewalt, M.D., F.R.C.P.; "Dermatology and Syphilis," by William T. Gottheil, M.D.; "Obstetrics," by Edward P. Davis, M.D.; "Diseases of the Nervous System," by William G. Spiller, M.D. Index. As we have remarked of previous numbers, the serial is a library of itself and every practitioner who wishes to keep himself in the front ranks should subscribe for it.

Publisher's Department

THE PROPHYLACTIC IMPORTANCE OF EFFECTIVE CORRECTION OF LIVER DISORDERS.

In connection with the modern tendency of medical practice to anticipate many human ills by instituting prophylactic treatment as soon as their possible occurrence is suspected—or, to perpetrate a bull, by “treating them before they begin”—it is especially interesting to note the growing recognition of the part played by the liver in the causation of many common affections. That the liver is an all important factor in the etiology of no small proportion of the metabolic disturbances, intestinal derangements and so-called auto-toxic disorders, is becoming more and more apparent as the physiologic functions of this great organ are given more careful attention and study. Moreover, as facts unfold, it is very evident not only that the importance of the liver has not been fully appreciated, but that prophylactic treatment to accomplish, with any degree of efficiency, the prevention of the ills referred to, must be directly primarily and principally to restoring and promoting the activity of the hepatic functions.

For many years the principal agents for attempting to restore the functional activity of the liver and regulate the portal circulation have been the hydragogue cathartics. In certain conditions these have been serviceable and more or less effective, but in many others they have proven valueless and even harmful, because of the exhaustion and depression resulting from the incidental catharsis.

In any comprehensive or effective scheme of prophylaxis of the affections due to insufficient or perverted hepatic activity the great desideratum is, therefore, to correct the liver condition without producing catharsis or purgation. The remedies that are able to meet this demand are very limited. In Chionia, however, the medical profession have a preparation of *Chionanthus Virginica* that can be relied upon to ex-

ert a prompt stimulating and corrective effect on the liver without setting up a severe and drastic action of the bowels. The possibilities of such a product must at once be apparent. Certainly clinical experience has demonstrated its therapeutic utility, for under its use the functions of the liver are promptly restored to the normal, with all that this essentially means on metabolic processes in general, the elimination of toxic wastes and the regulation of the bowels. The use of Chionia, therefore, through its potent influence on the liver affords a dependable means of preventing many ills that all too often lead to serious and prolonged invalidism.

STRAINING AT STOOL.

It is pretty safe to say that any bodily condition that is aggravated by pressure or congestion is aggravated by that daily straining at stool which is the rule rather than the exception with such a large percentage of humans.

When one stops to realize that in the act of defecation, every abdominal muscle is brought into play, and that many individuals customarily strain at stool with a force great enough to cause their faces to flush and their temporal veins to bulge out, then it is that one appreciates the tremendous force brought to bear locally upon the abdominal and perineal muscles and generally, upon the whole body.

Since defecation is a necessary function, and can not be suspended, it would seem that the best remedy for the difficulty of defecation would be to supply the lubrication that is often lacking.

Whatever will supply such lubrication without enervation or untoward after-effect would seem to be the most desirable method.

There is one outstanding reason why "Interol" does away with, or at the very least minimizes, straining at stool, namely, "Interol" has a peculiar *lubricating body* by which it mixes with the feces before they are feces, spreads over and mixes with them and lubricates them in their passage through the colon, until they reach the rectum, from which

they are finally expelled without necessity of very much straining.

There are other features "Interol" possesses, but this one is perhaps the greatest, and if you are personally interested in this subject, we would be very glad to send you a pint bottle with our compliments, so that you may make personal observation without having to take our word for the merits of "Interol."

WHEN THE STOMACH IS TIRED OR LAZY.

The artificial digestives, such as pepsin, pancreatic papain, etc., have their place in modern therapy, but they should always be used with care and common sense. How often do we encounter patients who are continually dosing themselves with pepsin or some one of the artificial digestives after each meal? Ninety-nine times out of a hundred this is unwise and a positive harm. Instead, the process of digestion should be encouraged—the stomach urged to do its own work—for any remedy that will specifically stimulate these functions to nearer normal action will produce permanent benefits that can never come from pepsin. Seng is such a remedy, with a well-defined secretory action on the glands and mucous membranes of the stomach that enables it to restore and increase the functional activity of an organ that in the great majority of instances is only over tired or indolent.

"I used the samples of Tongaline Liquid and Tongaline and Lithia Tablets for my wife, who was suffering from a severe attack of the grippe, with such success that she made a prompt and thorough recovery."

"Solution of Albuminate of Iron" (Liquor Ferri Albuminatis, Flexner). Contains 13 per cent alcohol. Each teaspoonful of this preparation represents one grain of dry albuminate of iron in permanent solution. A most valuable form of iron tonic. Prepared by Robinson-Pettet Co., incorporated, Louisville, Ky. (See adv. in this issue.)

NASHVILLE JOURNAL — OF — MEDICINE AND SURGERY

CHARLES S. BRIGGS, A.M., M.D., Editor.

W. T. BRIGGS, B.A., M.D., Associate Editor.

VOL. CX.

NOVEMBER, 1916.

No. 11

Original Communications

THE PSYCHOLOGY OF PRACTICAL CHARITY.

BY T. D. CROTHERS, M.D.,
Hartford, Conn.

Laymen and practical business men who have acquired large properties are confronted with the absorbing question of how to place their capital so that it will do the most possible good for the future. Most men are content to have their accumulations grow, but somehow the thought comes to them, what will become of this property when they die.

Inquiry into the histories of persons who have gathered large properties and left it entirely to their children, show that in a very large percentage of instances this money has practically wrecked their descendants. Sometimes this wreckage goes on to the second or third generation. However carefully they may entail it and limit the amounts to be spent, it always disappears after a time. It is impossible in this country to found families of wealth that will go to the future as seen in England and on the continent. All the big cities furnish numerous examples; possibly two or three per cent may retain the property in the second or third generation, and even go on longer, and yet there is a constant disintegration and breaking up and dying out of skill and ability to

care for property that has not been acquired by hard labor and good judgment. Families who come in possession of large amounts of money, no matter what their previous training has been, have little or no incentive to do more than gratify the impulses of the present and oft become reckless and have no business sense of the business and care necessary to retain the property. Hence, poverty in the second or third generation is almost sure to follow. This may be considered a rule to which there are very few exceptions, hence, the man who has spent all his energies and the best years of his life in accumulating money, makes a profound blunder in leaving it all to his family, not only wrecking them, but leaving complexities and complications upon which the legal profession thrives and becomes prosperous.

Shrewd business men realize that money given to hospitals, sanatoriums and public institutions are seldom utilized and put to the best service. Often it is expended in palatial buildings and expensive appointments, and when these are completed, there is a very small margin left to carry on the work. Thus, the real charity has been minimized and diverted from what it was intended.

A recent instance illustrates this. A man whose family had largely died of consumption left a very large sum for the treatment of indigent cases. A supposed benevolent committee expended a large sum of the money in the buildings and the land, and when it came to practical work, it was found to be unusually expensive, because of the distance from a railroad and the cost of treatment. It was literally a failure, although still in existence and struggling for other endowments to keep it agoing. The donor refused to give any more money.

Another fact is painfully evident that endowments for educational institutions, for free beds in hospitals, for old people's homes and charities of all kinds, are always subject to a very heavy percent of the original money, which is expended in care and management. The skill which accumulated the property is seldom seen in its distribution in charitable institutions of any kind.

A great millionaire in New York, in despair, left his money entirely to his wife to distribute it for charity. The poor woman

was overwhelmed with solicitors and beggars, and finally she put it in the hands of commissioners. Each settled on themselves a good salary, then started out to invest the property, so as to bring the largest returns, and confined their efforts to dispensing of the interest to the various charities that appealed to them. So far they have managed to give small sums here and there with great pretention and show of business. While the widow is relieved of the burden, the money has practically gone into the hands of a trust, who will perpetuate it as far as possible. There is no remedy for this abuse and the will of the widow will probably provide for a continuation of the plans which they have begun.

A retired clergyman in Boston, who had in various ways become the possessor of a large sum of money, founded a religious publishing house and made provision for the continuous publication and distribution of tracts and literature of the faith. His children joined in this and kept on in their usual way, and now have the satisfaction of knowing that the monument which their father built in this charity will carry the name far down to the coming centuries.

The late Doctor Pearson, of Chicago, through fortunate adventures in land, became the possessor of over ten millions of dollars. His observation taught him that no matter what he did this money would be scattered the moment he died, with little or no benefit except to the lawyers. He refused all beggars and solicitors and determined to spend this money himself before he died, buying an annuity which insured him a stated sum every year. He gave his whole time in giving away this money where it would do the most good.

In one of the noted eastern colleges for women he found a great many of the girls were obliged to suspend their educational course because of their inability to pay board and room rent. He built a large dormitory and endowed it to supply this want, the college having no expense except to keep it in repair. This charity has given the college a foremost place in the country.

On another occasion a southern college appealed for a hospital building for sick students. On examination, he decided they needed a new water supply and not a hospital, so he bought a

pond and water shed and supplied modern waterworks, piped into the college, with provision to keep it intact for the future. This was another charity that showed the physician's instinct and superior judgment and disposition of property where it would do the most good.

A certain hospital received a large sum of money for the endowment of a free bed and room. A poor man in his employ was sent to occupy this room. On recovery the managers sent a bill for expenses. The doctor withdrew his endowment and the hospital authorities contested it. The matter was carried up to the courts and the money was finally returned. He immediately supplemented his other donations with the most stringent rules of how the money was to be used, with a reserve that if not so used, it would revert to something else.

To his own family he gave certain sums of money in trust and required release papers for any obligations in the future.

Finally the doctor died and there were no legal questions or claims and no lawyers to divide any property. Thus, he left a great object lesson to business men and left charities that will bless his name and memory for all time.

Physicians, of all others, note the curious dispositions of property and the often stupidity of the donors. Often they are appealed to for advice as to what to do. Sometimes their judgment is accepted, and not unfrequently it is followed by the most satisfactory results and good to the world.

An instance in London of a man dying in St. Bartholomew's Hospital is most interesting. The attending physician to whom he appealed for advice suggested a school for homeless boys picked up on the streets, and the school to be called after the donor's name. This was executed and carried out. This school has been in existence over a century, caring for and training boys who are lost and abandoned on the streets. After fifteen years of age these boys are apprenticed out to trades and professions, and many of them have become very useful and prominent citizens. Here was a charity that has blessed the world over and over again and will go on through the years to come. The managers and directors have showed great wisdom in handling funds

and the building and its grounds are, literally, not only a monument to the donor, but to the wisdom of the physician who suggested it.

On the other hand, misplaced charities, like the following, are very common:

Endowments, amounting to many million dollars, have been given to several colleges in this country, all of which have been practically invested in buildings. This gives a certain grandeur and imposing appearance, but how far this has increased the teaching facilities is unknown. There are innumerable churches, built as memorials on the same general plan. The money is all spent in the building. How far it can make the church work stronger and better is not always apparent. Often a memorial church in a country village or a palatial school building with all external luxuries and appointments, is a sad reflection on the wisdom of the donor. Both churches and schools are confronted with poverty and struggle to keep agoing. An instance of this kind was that of Trinity Church, of New York, and some enthusiastic supporter, who built a \$50,000 church building in a community that had never been able to support any sort of a church. This building is in ruins, and has, for over twenty years, been abandoned. Legislators and communities are often urged to appropriate moneys for great charitable buildings which, after a time, literally fail to do the work intended, simply because of the foolish expenditure of money for outside appointments and impressive buildings. The Carnegie Library Fund is practically one of the great business charities of the time. None of the buildings are put up for show, but with each donation there are obligations and responsibilities on the town and community for their perpetuation, which gives a personal interest in the work they are doing, and makes them of practical value to every community. Thus, in almost every direction the kindly impulses of individuals who have acquired a surplus of property, and who would like to leave it to make the world better, is very often thrown away in foolish blunders and impractical efforts. There are a few great charities with the central object of the study of diseases and the causes of the great evils of the world; these have

already made good and in a very startling manner returned to the world the richest blessings. There are few hospitals and homes that care for the sick, the worn and the aged, that are making the world brighter and better and bringing a real blessing to every donor and supporter. On the other hand, there are hospitals whose buildings and grounds have the most impressive appearance and who bear the name of some man who has made a large amount of money and by this means seek to leave a monument for himself for the future, but literally, they are gloomy, desolate homes, managed in the most abstemious way, and are so cheerless that the inmates are always anxious to get away. There are other hospitals less pretentious, in the suburbs, perhaps, of the city or town, that exist by the welcome charity of people who do not wish to be known as givers, that are doing great work and are really welcomed by the inmates obliged to occupy them. It is the constant observation in the neighborhood of large cities that business men, who have acquired large sums of money, expend it in palatial homes and magnificent surroundings, with no other result than to occupy it for a brief time, and to give homes for armies of servants. When they die, these properties do not realize ten cents on the dollar. They indicate, beyond question, the reckless, foolish judgment of the owner who, while being very acute to acquire money, is almost an idiot in his ability to expend it properly. Many of these palatial homes become sanatoriums, but it is almost impossible to keep up appearance and make them practical for the purposes called for. Physicians could do great pioneer work along this line in suggesting and advising their patrons how to put the money they have accumulated to the best possible use for the future. Not unfrequently a selfish physician will study in some way to be benefitted by the money his patron proposes to give, and this is a very dangerous field. One such man confided to a lawyer that he was to receive a very large sum of money on the death of a certain man. The lawyer advised to have the will changed and thus avoid a contest. If the money was put in trust for a distinct object, which was reasonable, the heirs would accept it. He might be made the director of this charity and thus profit indirectly. This was done, and the doctor

is now at the head of a great charity with an ample income as long as he lives.

How often illustrations like the following occur:

A man dies, leaving great wealth. His family and relatives gather from all directions, like birds of prey, awaiting the expiring breath of an animal before they will seize on it to engorge themselves. Wills are produced, and contests are started, and questions of capacity to make a will go into the court. An army of lawyers gather and years roll by and, finally, a very little property is divided. It has been lost in legal contest. Endowments of homes, colleges and innumerable charities are constant every day, and on the whole the world is better for it. There are failures, perversions and losses, of course, but somehow this money, if turned into broader channels, would lift the world higher up.

The fields for scientific research are growing wider every day for study of facts and their practical application along the lines of preventive medicine and better living. If this stream of charity could be turned in this direction, how positive and rapid the evolution of the race would go on.

Everyone recognizes today the field of germ diseases, and two grand laboratories are working out problems along those lines that will change the whole field of medicine.

Take the alcoholic question. Already there has been laboratory work in this field, done by independent solitary workers, that have given new aspects to the whole subject, and there are greater fields yet literally unknown awaiting discovery.

The study of the phenomena of heredity, and the mysterious influences which drive men to drink from all circles of society, must be taken up scientifically and studied for no other purposes except to find the facts and their meanings. These are the new fields of science that appeal to wealthy men to contribute of their means and make it possible to escape the disasters which threaten the race.

Doctors, as well as all others, are deeply interested in the great problems of how to live better, how to escape the perils and conflicts that come from every side. There is a realm of psychology here that has never been studied, and when taken up, would widen

the practice of every physician and lift him out of the realm of drug giving and make him a counsellor and judge in the larger sense of that word. Now, if the business instinct, which has enabled so many people to accumulate property beyond what was necessary to supply the comforts and pleasures of life, could be turned to make the world richer, by endowing institutions and furnishing means to conduct investigations into these new realms, the world would be better for the living.

A Research Foundation has been projected at Hartford, Conn., to explore the physical and psychical causes which are formative in producing the drink evil. Endowments for this work are not to be spent in palatial buildings, but for actual work. This is a new field that offers a splendid opportunity for the shrewd business man who has acquired property to perpetuate his name and memory for the future. This is an opportunity for discoveries of practical working facts that will be as startling as those in the field of electricity. Someone will realize this and have the satisfaction that his life and work has not been in vain. That what he has accumulated will go on widening the world through the ages.

The real psychology of modern charity calls for a change in the present methods. Accumulated wealth should be turned to practical fields and made to reproduce something real and intangible, not only to perpetuate the owner's name, but to make life sweeter and broader for the generations to come.

THE INDIAN IS NO LONGER A VANISHING RACE.

BY DR. LAWRENCE W. WHITE,
Superintendent Lac du Flambeau (Wisc.) Indian School.

At the Panama Pacific Exposition, held in San Francisco last year, there was placed in a prominent part of the grounds a statue that attracted a great deal of attention. The subject was an Indian with everything to indicate that he was worn and weary and had abandoned all hope. The forlorn and dejected figure was mounted upon a pony which was in every detail in perfect harmony with his rider. The title of this pathetic piece of statuary was "The End of the Trail." It faced the West and was very near the brink of the Pacific Ocean. The author had evidently intended to indicate that the "Noble Red Man," after having passed from the Atlantic Seaboard across the continent, first having been halted at various places in the passing, and segregated upon small reservations, each growing smaller and smaller until at last he had reached the extreme limit of his career by coming to the end of the continent—to him the end of the world. In a word, it pictured the last of a dying race.

One Sunday during August, 1915, while the Conference of Indian Workers was in progress, many of the churches of San Francisco held services at which the theme was "The Indian and His Condition," and at almost all these services the ministers spoke of the pathetic significance of this statue, and were unanimous in proclaiming, "Lo, the poor Indian is fast passing from our midst. We have with us but a short time the Indian, a dying race."

This was not a new idea. For a great number of years we have had chanted into our ears the facts concerning a dying race until we have become well accustomed to it, and, I fear, have commenced to take it as a matter of fact. For it was true, the number of Indians was becoming smaller each year, and this was largely due to the faulty manner in which he had taken up the white man's civilization. He was taken from a domain as large as the continent itself and compelled to occupy very restricted

areas before he was taught the proper rules of sanitation. The bow and arrow were supplanted by the rifle and high explosives before he was taught the proper conservation of his natural food supply which he then had a means of rapidly destroying. The white man initiated him both by precept and example into the mysteries of drowning his many troubles in a bottle of whiskey without first telling him that in that same bottle of whiskey lurked death and destruction to his mental, moral and physical being.

He was rudely introduced to, and infected with, our most malignant infectious diseases without having been given any adequate means for coping with them and, after having been infected, was left to his own primitive methods for expecting a cure. He has been given food to which he was not accustomed without a knowledge of how properly to prepare it. To sum it up, he had been forced into a new world and compelled to live a new life without a rule or law, yet learned, by which he might adjust himself to his new surroundings.

Is it a thing to be marveled at that he should become the prey to all the ills to which mankind is heir? A race of people who had naturally been of powerful physique had been reduced to a state of weaklings, a condition of degeneracy had overtaken the former red man of the forest who had roved at will over vast areas. His habitation was now more or less permanent and in order to be healthful must be kept clean. This he did not understand nor undertake.

Children were born into surroundings which were far from sanitary, with possibly a drunken father and mother, neither of whom had made any preparation for the arrival, the care, or the maintenance of such a child. Is there any wonder such a one frequently succumbed before the end of the second summer after its advent into such a vale of tears?

Those who escaped death by a narrow margin through the years of childhood and reached manhood arrived there too frequently only to become a subject to be preyed upon by some disease as tuberculosis or trachoma. Too often the young Indian arrived at adolescence already scarred and disfigured by the former, and frequently blinded by the latter.

Is it so very strange then that these poor people for whom we had been so zealously guarding their land, their timber, their mines, their oil and gas, and possibly been negligent of their health, their lives, should finally furnish food for thought for a sculptor who would mould his thoughts into a statue like "The End of the Trail?"

The Indian had passed into a state of decadence and a lethal issue was imminent for the entire race when three years ago the present Commissioner of Indian Affairs faced the condition squarely and said, "To discover such a condition and not correct it were criminal." With this object in view every wheel in the machinery of the Bureau of Indian Affairs was set turning to correct the conditions which had made the Indian a dying race. He said "There is something fundamental here: we can not solve the Indian problem without Indians. We can not educate their children unless they are kept alive."

Commencing with that period, three years ago, originating with the Commissioner of Indian Affairs and passing on down through every office and field employe, there has been an awakening, a quickening. Each one was made to feel that here was the great, the vital work of the Service, without which all the other would be worse than useless.

The great value of medical and surgical skill and service was seen and appreciated, therefore more doctors, ophthalmologists and dentists. For getting the best results from the work of the physicians, the invaluable assistance of the trained nurse was recognized and this branch of the Service was augmented and improved. There was still a broad field which had not received the attention it deserved. The Field Matron, the sturdy champion of cleaner and better homes, restored constitutions and improved health, and babies to be proud of, she now came into her own.

Then came that glorious campaign to save the babies. This again originated with the Commissioner and was taken up enthusiastically by practically every employe of the Indian Service. In the Commissioner's famous letter to the field upon this subject he said in part:

~~~~~



"If we have an Indian policy worthy of the name, its goal must be an enduring and sturdy race, true to the noblest of its original instincts and virtues and loyally sympathetic with our social and national life; a body of efficient citizens blending their unique poise and powers with the keen and sleepless vigor of the white man.

"We must, therefore, renew daily our warfare against the arch foe of efficiency—disease.

"We must begin at the right place—not only with the infant at its mother's breast, but with the unborn generation.

"The new campaign for Health in which I would enlist you is, first of all, to save the Babies!

"Statistics startle us with the fact that approximately three-fifths of the Indian infants die before the age of five years.

"Of what use to this mournful mortality are our splendidly equipped schools?

"I earnestly call upon every Indian Bureau employe to help reduce this frightful percentage! Superintendents, teachers, physicians, matrons, nurses, everyone can do something by instruction or example, the physician with his science, the nurse with her trained skill, the matron with her motherly solicitude, all of us by personal hygiene, cleanliness, and sobriety.

"With this idea uppermost, all employes whose duties bring them in touch with Indian families must work in closest harmony for surrounding the expectant Indian mother with favorable health conditions before and after childbirth. The sanitation of the house of such women should have special attention and no baby allowed to be born into an environment germinating disease, if prevention is available.

"I want to send this safety, as far as possible, into every home of an Indian mother, whether that home be a tepee, a tent, a log house with dirt floors or a more comfortable abode.

"The crux of the matter is: We must, if possible, get rid of the intolerable conditions that infest some of the Indian homes on the reservation, creating an atmosphere of death instead of life."

In compliance with the policy here outlined, Superintendents began more thoroughly to acquaint themselves with the home conditions of the Indians of their reservations, with the object in view of eliminating, as far as possible, everything that retarded the improvement of health conditions. He found many, but the reward to the faithful was certainly gratifying.

The physicians were started on systematic sanitary inspections. They found conditions which were deplorable. When such conditions were found, means for correcting them were instigated and, following plans suggested by the physician's science, much was accomplished.

Appreciating the value of good teeth in relation to good health, an effort has been made to provide dental facilities for the Indians through a corps of traveling dentists. While these employees have, up to this time, been compelled to confine their efforts largely to the schools, yet they have accomplished some work among the adults, and the demands upon their services are so great that no doubt remains with respect to the appreciation of the Indians for this form of treatment. As funds permit, it is hoped to increase this service more adequately to meet the demands upon it.

The trained nurse, with her technical knowledge, was called upon to care for the sick as only a trained nurse can. The Field Matron, the farmer, the teacher, in fact every field employe, was soon an enlisted soldier in this army to fight in a campaign to restore the constitution, to regain the health, to save a race that had, by competent persons, been proclaimed to be dying.

"Baby Shows" have become a part of every Indian fair, "Baby Weeks" and "Child Welfare Exhibits" have been carried out on nearly every reservation in the Indian country. "Mothers' Meetings" have been instituted, "Little Mothers' Leagues" formed, and other educational features have been made a part of this campaign with the idea of teaching the Indian mothers the proper way of caring for their children.

This campaign was far from being an easy one. Much was required in order that it might be carried out as planned. The hospitals were neither numerous enough nor well enough equipped to meet the demands upon them. The number of thoroughly qualified physicians in the service was far too small. More trained nurses were needed as were also field matrons. A diffusion of knowledge along lines of sanitation through the distribution of literature in the field was urgently needed. How these conditions and demands were met may be seen by the following figures:

In 1912 the medical force of the Indian Service consisted of:

- 1 Medical Supervisor,
- 2 Ophthalmologists,,
- 1 Physician Expert,
- 1 Assistant Physician,
- 89 Agency Physicians,
- 53 Contract Physicians.

This force has been increased until now it consists of:

- 3 Medical Supervisors,
- 7 Ophthalmologists,
- 130 Agency Physicians,
- 76 Contract Physicians,
- 7 Field Dentists,
- 6 Field Nurses.

In addition to these there are also substantial increases in the number of hospital nurses, field matrons and miscellaneous hospital employes, the exact number of which can not be easily computed. Besides this, note the increase of General Health Appropriation, known as "Relieving distress and Prevention, etc., Diseases among Indians":

|                    |            |
|--------------------|------------|
| Fiscal year, 1911, | \$ 40,000, |
| Fiscal year, 1912, | 60,000,    |
| Fiscal year, 1913, | 90,000,    |
| Fiscal year, 1914, | 200,000,   |
| Fiscal year, 1915, | 300,000,   |
| Fiscal year, 1916, | 330,000,   |
| Fiscal year, 1917, | 350,000.   |

To be requested for the year 1918 will be \$400,000. The amount used for this purpose having been multiplied by ten during the last eight years, the larger part of the multiplication having occurred in the past three years, and the results obtained have more than justified the expenditure.

What has been done with this money? Here it is in part:

Hospitals built or under construction during 1914 and 1915 at the following places at a cost ranging from \$3,030 to \$48,954 each:

Blackfeet, Montana; Carson, Nevada; Cheyenne and Arapaho, Oklahoma; Mescalero, New Mexico; Pima, Arizona; Turtle Mountain, North Dakota; Navajo, Arizona; Albuquerque Pueblo, Laguna, New Mexico; Fort Peck, Montana; Moqui, Arizona; Tohatchi, Arizona; San Juan, New Mexico; Spokane, Washington; Winnebago, Nebraska; Canton Asylum, South Dakota; Cherokee, North Carolina; Fort Totten, North Dakota; Cheyenne River, South Dakota; Choctaw-Chickasaw, Talihina, Oklahoma; Fond du Lac, Minnesota; Kiowa, Oklahoma; Leech Lake, Minnesota; Pine Ridge, South Dakota; Red Lake, Minnesota; Rosebud, South Dakota; Standing Rock, North Dakota; Fort Lapwai Sanatorium, Idaho; Sac and Fox Sanatorium, Iowa; Phoenix Sanatorium, Arizona; Crow Hospital, Crow Montana; Truston Canon, Arizona; Jicarilla, New Mexico; Crow Creek, South Dakota; Hoopa Valley, California.

This vast number of well equipped hospitals are well distributed over the Indian country.

Besides, there has been an immense amount of valuable literature, both gathered and prepared in the form of pamphlets, and then distributed in the field of which these are some:

"Indian Babies, How to Keep Them Well."

"Save the Babies" number of "The Red Man."

Distribution of the U. S. Health Bulletins on such subjects are:

Sewerage Disposal,

Poliomyelitis,

Summer Care of Infants,



Tuberculosis,  
Typhoid Fever; Causation and Prevention.  
Sewerage polluted water supply in "Relation to Infant  
Mortality."

The following books and journals have been distributed to school and agency physicians:

"Journal of American Medical Association,"  
"Therapeutic Gazette,"  
"Fuch's Ophthalmology,"  
"Roseneau's Preventive Medicine and Hygiene,"  
"Pulmonary Tuberculosis," Fishberg.

And copies of Brown's "Rules for Recovery from Tuberculosis" were distributed to field matrons.

These were all prepared, distributed, read, and put into execution in carrying out this great health education campaign.

What were the results of all this expenditure of funds, enthusiasm and effort on the part of all those thus engaged in refuting the too-oft-repeated statement that the Indian was a dying race?

The Indian's constitution has been restored, his health conditions improved and death rate decreased wherever there are Indians to be found. Babies who before had been born into surroundings contributing every cause for an early death now come into the world where previous preparation has been made, in a clean home or in a hospital where the mother was cared for and taught properly to care for her offspring. Such babies come to stay, and are making statistics to show to the world that the Indian is not a dying race. Besides, they are filling happy homes where before they had proven to be the despair of heart-broken parents who had seen them come only to find a place in their affections and then be taken from them by diseases they knew not.

Those who had been suffering pain and blindness from the effects of trachoma have now found relief and now live to bless the good Samaritan who brought this relief to their doors. The old and young are coming to realize that grewsome death lurks in filth, and that disease is spread by such agents as the common drinking cup, spitting upon floors, and the presence of flies in the house.

These results are further proven by the health reports sent in from the whole country. In proof of this statement I quote the following:

Dr. Newberne, Traveling Medical Supervisor, reports on San Xavier: "The birth rate for the last fiscal year as expressed in terms of the number of births to the thousand of population was a little more than forty, while the death rate was not much above sixteen per thousand, which is no higher than that of some of our best cities."

Dr. Newberne, or. Sac and Fox, Oklahoma, states: "From the foregoing figures it will be seen that the aggregate increase in the male population is twelve and that for the female population thirty-four, or a combined increase of forty-six. This, in spite of the fact that an epidemic of smallpox occurred on the reservation, which caused fourteen deaths."

Dr. Newberne Poncas: "Into the Poncas Tribe there were born eight males and eleven females, a total of nineteen during the last fiscal year, while their deaths amounted to only five, a net increase for the year of fourteen."

Dr. Newberne: Shawnee Agency: "The last compiled vital statistics makes the following comparisons of births and deaths for the fiscal year 1915: eighty-five births, fifty-two deaths, excess births over deaths, thirty-three."

Dr. Newberne, Turtle Mountain: "During the fiscal year the number of births was 106, the number of deaths was forty-six, thus showing a net increase in population of sixty."

Dr. Newberne, Fond du Lac: "During the last fiscal year there were born thirty-four children, while the death rate for the corresponding period was twelve, showing a net gain in population of twenty-two."

Dr. Newberne, Leupp: "The number of births for the last fiscal year was one hundred and ten, the number of deaths was thirty-four, thus leaving an increase in the population of seventy-six."

There are innumerable reports of this very same kind coming as they do from almost every agency in the Service and almost everyone showing more or less increase. One superintendent

writes an especially interesting health report, which I take the liberty of printing here:

"The general health conditions at this school and agency have been good.

"No epidemics or infectious or contagious diseases other than tuberculosis and trachoma have been prevalent, except that during the early spring of this year typhoid fever made its appearance at one of our schools, but prompt measures soon eradicated this disease. During the early fall smallpox made its appearance in one family, and although seven members of the family were brought into contact with the disease, prompt vaccination of the entire family prevented its spreading absolutely.

"Sanitary conditions throughout the reservation, especially in and around the Indians' homes, have been very good. We, of course, find numerous cases of trash, but little filth. Our Field Matrons are giving this matter careful attention and good results are being secured.

"Agency physicians have done all in their power to relieve the sick and overcome the practice of Indian doctors. Every physician on this reservation is competent to cope with the conditions and is rendering satisfactory service. Trachoma is the greatest danger confronting our Indians at the present time. Our physicians are all qualified to handle this disease, each of them being practically specialists in its treatment. The Indians' Hospital recently constructed on this reservation will prove a God-send to the Indians here, and its recent opening will be, and has been, welcomed by a number of our Indians. While the equipment has not all arrived, we are doing effective work and when entirely equipped the hospital will be the equal in effectiveness to any in this section of the country."

A stalwart advocate of all things that tend to the uplift of the Indian either mentally, morally, or physically; a strong character in the Indian field who has for twenty-three years fought their battles as if they were his own, has recently said, in speaking of the Indians' condition: "I have learned to be a philosopher rather than a pessimist." This man read a paper at the same conference of Indian Workers before referred to, and at its conclu-

sion spoke of "The End of the Trail," saying the time had come to reverse the conditions there depicted, that the Indian was replacing that expression of dejection and despair with one of hope and courage, that he should now right-about-face; face eastward, not westward, look upward, not downward, look forward, not backward, and march shoulder to shoulder with his white brother, meeting and surmounting the same difficulties, and thus achieving the same successes together." And this has proven not only possible but practical, and these very conditions do now obtain because of the greatly improved health and restored constitutions of the once enfeebled Indian.

Then a few days later at that 1915 conference came into our midst the Commissioner, dust covered and sunburned, from a six-weeks' stay with the Pimas and Papagoes in the deserts of Arizona, and when he had barely taken time to brush the desert dust from his clothing he announced in his big whole-hearted, enthusiastic way that the tide had certainly turned, that it could no longer be truthfully said of the Indian that he is a vanishing race. Well-formed plans, by hard and coöperative work had been successfully carried out,, and the desired result had been achieved. The Indian was now on the firm foundation of better health conditions. The birth rate had gotten into the ascendancy over the death rate.

To verify the fact here stated, that is, that this condition has come to stay and is still improving, I will call your attention to these figures which have been collected by states and are accurate, but exclude the Five Civilized Tribes and certain unattached Indians of California, data upon which is not at present available :

Vital Statistics, 1916:

|                             |         |
|-----------------------------|---------|
| Total Indian population---- | 209,224 |
| Total births -----          | 6,092   |
| Total deaths -----          | 4,570   |
| <hr/>                       |         |
| Births over deaths-----     | 1,522   |

Has not this been a glorious, a beautiful, a great humanitarian success. To have reached down as it were and snatched the noble



race of people from the very jaws of death. To have restored the constitutions of men and women who were falling into decay, to have given vision to those who otherwise would soon have been permanently blind, to have given that poor babe at the mother's breast its deserved chance to live. Is not this the greatest, the most ennobling deed possible for anyone to accomplish? It is a thing to attract the attention and call forth the admiration of the civilized world, and certainly marks the most distinct epoch of Indian history.

Who should share in the thanks which are due for the accomplishment of this stupendous task?

The old Indians themselves who have so readily and confidently taken the health suggestions which were made to them. The Indian child who has taken the lessons of sanitation learned in the school room, together with clean rags and soap into his home and accomplished wonders for health there. The returned student from the larger schools, with his broader training, who has gone to his home and his people with the gospel of cleanliness and health to all these some thanks are due.

To the matron, disciplinarian, the clerks in school and agency offices, and every industrial employe connected with the work who have faithfully taught by precept and example rules which so nearly concern the temporal welfare of all Indians, they, too, should be thanked.

To those faithful, untiring school teachers, who every day, and at least three evenings in the week, endeavor so earnestly to teach the Indian boy and girl those things which will preserve their health and build constitutions which will save their race. Some of them sacrifice every day of their annual leave in order to attend normal school to better fit themselves for the next year's work. We have such teachers, and to them should be extended thanks.

To the physician, the nurse and field matron, these who have ministered unto the sick and afflicted, have cared for the mother and her new-born babe, have watched by a death bed, closed eyes in the last long sleep, and spoken words of comfort to the bereaved ones, and have done all this sometimes in the silent

watches of the night while others slept, to these there is surely something due.

To the Superintendent, the autocrat of the reservation or school who is, or ought to be the good father of the whole tribe, who settles their domestic and financial troubles, advises them as to all things concerning the home, health and happiness, who should see to it that the new born infant is provided with swadling clothes and that the dead are provided with a shroud and coffin, who can with equal grace perform a marriage ceremony or preach a sermon in the school chapel on Sunday evenings—to him, let's say "thank you."

To those faithful office people, together with inspecting officials who have so patiently listened to our S. O. S.'s, which we are continually sending in, giving the help when available, and kindly assuring us they are sorry when such help was beyond reach, we all thank them.

The master mind of this great health campaign, the man who conceived and directs it all, whose mental vision is far-seeing, whose big heart is overflowing with the milk of human kindness, who found a dying race and like the great humanitarian he is, placed it high upon a pedestal of safety—God bless him—Our Commissioner, Cato Sells.

## Selected Articles

---

### FISSURE AT THE ANUS.

---

BY CHARLES J. DRUECH, M.D.,

Professor of Proctology at the Chicago Hospital College of  
Medicine; Surgeon to the Fort Dearborn Hospital.

---

A fissure is a solution of continuity of the tissues at the anus or of the anal wall, caused by traumatism of a hard fecal mass, a foreign body, or straining at stool or at urination, and characterized by acute pain during or after each stool.

Of all the distressing lesions of the human body there is none the suffering from which approaches in any degree that from so apparently slight a pathology as a fissure of the anus, or which causes so far reaching results. But if this condition is seen early and promptly diagnosed it readily yields to treatment. Even in old cases where the patient's vigor and nervous stability have been shattered the fissure may be cured and physical health restored. All ulcers in the rectum or anus occasion some pain, but fissure is distinct from the destructive and extensive ulcers.

A fissure occurs more frequently in the posterior quadrant of the anus near the posterior commissure, or occasionally in women in the anterior quadrant, but rarely upon the lateral walls. It may be found anywhere from the mucocutaneous junction to the upper limit of the column of Morganig; the majority begin at the upper limit of the anal canal, at the lower border of the internal sphincter, and extend downward. Infection readily takes place in the abraded surfaces, burrows up or down beneath the mucous membrane, or the lymphatics carry it into the ischio-rectal anterior or posterior rectal spaces and an abscess or, perhaps, a fistula may result.

*Etiology*.—Many plausible theories have been advanced as the causes of fissure, but these after all are based upon the fact that

the individual has suffered with constipation which has permitted fecal masses to remain in the rectal pouch until they produced local congestion, or, perhaps, pressure necrosis or ulceration, and also a general auto-intoxication. The mass dries out and later the fecal concretions, sometimes stony hard, are expelled with considerable straining and difficulty, thereby dragging down and tearing the mucous membrane. The trauma may be produced by a foreign body, bones, bits of tooth pick or the like in the stool, or by injury with an enema tip, or the straining occasioned by coughing or sneezing. Moreover, anything which narrows the lumen of the anus, as a polypus, stricture, congenital malformation, pregnancy or parturition, tends to drive a hard fecal mass unduly harshly against the mucosa as it passes. The fissure may also originate from an inflammatory condition or an edema at or near the anus which softens the tissues and weakens their natural resistance.

Infection takes place in the ulcer, thereby irritating and inflaming the delicate nerve twigs, and sets up a spasm of the spincters. This spasm in turn causes constant motion of the base of the ulcer, besides rubbing infection into the wound. Thus we have a vicious circle established.

Fissures occur at all ages and in all conditions of life, but particularly in young adults. In infants they are often an expression of syphilis but not always. They are estimated to constitute 20 per cent of all rectal disorders. There is considerable difference of opinion as to the relative frequency of fissure in men and women. Lynch says it occurs twice as frequently in women as in men, but Goodsall observed it oftener in the latter. The fissure is nearly always single except in chronic proctitis, gonorrhea and syphilis, where it is usually multiple.

*Pathology*—The anal fissure is an elongated rent in the mucosa and is limited to a sulcus between two radial folds of the anal wall. It spreads up and down by the action of the feces against the membrane, but not laterally. The ulcer is very like the crack in the epidermis of the hands when chapped. If the mucosa were spread out the ulcer would prove to be somewhat circular in outline.



The abrasion or tear which at first is superficial soon becomes an ulcer by infection. The edges are thickened by inflammation of the surrounding mucosa and undermined by the constant muscular spasm at the base of the wound. The whole depressed surface of the ulcer is at first bright red and bleeds easily when touched. Later fatty, grayish granulations, mucus, pus, and pseudomembrane cover the surface. At this time the edges are pale, indurated and distinctly undermined, with sinuses leading into the surrounding tissues. The whole ulcer and surrounding mucosa are distinctly congested and the underlying muscular wall, which has been laid bare, is spasmodically contracted. At the lower end of the fissure the mucous membrane or mucocutaneous border is frequently hypertrophied, resembling a pile, the so-called sentinel pile, which is sometimes divided into two parts by the fissure. It is excruciatingly painful to the touch, and if manipulated brings on the characteristic pains. Cicatrization and apparent healing are always going on, but repeatedly breaking down again. The ulcer may perhaps heal over temporarily, but will soon be torn open by hard fecal masses or straining at stool. Such conditions alter the vascular and nerve supply of the parts. A thoroughly inflamed fissure closely resembles a chancre and may be difficult to differentiate. The local history and the absence of other syphilitic symptoms are determining factors.

*Symptoms*—Patients generally can not date the onset of the first symptoms. Occasionally there is a history of a sensation of something giving way during a difficult constipated bowel movement, with perhaps a slight discharge of blood. Usually the patient states that there has been for some time an itching or pain when defecating or immediately after, and often accompanied with a drop or two of blood which stains the sides of the fecal mass or is noticed on the toilet paper. There is no visible discharge of pus or mucus.

From the beginning the fissures causes pain, which at first is due to the trauma and the raw surface exposed to the irritating action of the fecal passages. It is burning, cutting, and tearing, comes on with or immediately after the passage of the stool, but lasts only a short time, a few minutes. Soon the wound becomes

inflamed, and the pain and smarting may continue for one half to one hour and be so severe that the patient can not rise from the toilet or must seek his bed to lie there in agony until the pain subsides. After the pain disappears he may get up and attend to his usual duties in peace until the next bowel movement, when his seance is repeated.

Later the wound edges are thickened and are jammed into the ulcer by the contracted muscle, and the pain is constant, although with especially severe paroxysms at each and every bowel movement. The pain is changed in character from that experienced earlier and is dull, throbbing, aching like a toothache, and radiates to the back, especially the sacro-iliac joint, and shoots down the legs and may last for several hours, or even all day. Some such patients are never free from distress. These pains may be referred to the prostate or the ovaries and mislead us in the diagnosis.

Pain occurring immediately after defecation indicates involvement of the external sphincter or the muco-cutaneous margin, while that which comes on some time after stool indicates ulceration high up in the rectum. These latter ulcers are usually of long standing. Generally speaking, the acuteness and severity of the pain are in relation to the nearness of the ulcer to the anal margin. Also the wider the skin involvement the greater the pain.

Constipation is sometimes occasioned by restraining the regular evacuations because of fear of the pain following the bowel movements. Later it becomes a habit, and as a result the stool is more painful because the feces are harder, dryer, and more irritating the longer they are retained and when expelled cause much more pain and injury.

Frequent urination and dysuria are often found as reflex symptoms early in this affection and may be overlooked, or the patient may be treated without avail for cystitis, urethritis, urethral stricture or prostatitis, especially if the pain in the rectum following the defecation is not very sharp. This frequent desire to urinate may come on every fifteen or thirty minutes. A few ounces only are voided at a time, and there persists an annoying dribbling accompanied with a spasm of the vesical and anal sphincters and a

feeling of uneasiness at the anus. Some time ago I saw a patient in whom this annoying reflex was repeatedly set up by a fecal accumulation in the rectal pouch, but would promptly subside with a rectal flushing. The sympathetic nerve supply of the bladder, urethra and rectum is so closely interwoven that irritation of one part is readily reflected to another. Many widespread reflex disorders due to nervous exhaustion from the constant pain and the disturbed action of the bowels may result from a fissure.

*Diagnosis*—The diagnosis of fissure in ano is relatively easy. The anus must be carefully examined and the subjective symptoms confined by the local findings, as pain of a similar character may be due to a number of other conditions. The patient is placed on his left side and asked to bear down. The buttocks are gently separated and as he strains the fissure usually comes into view. The sentinel pile, if present, is recognized, or it may be that the ulceration involves the mucocutaneous margin.

If not seen, the skin about the anus is to be firmly but gently palpated. An hypertrophied sphincter will be noted and pain elicited on pressure over the region of the fissure. By this procedure the location of the fissure is determined and the digital or specular examination made less painful. In women a finger introduced within the vagina can evert the rectum, or at least the anterior wall, and expose the ulcer to view.

Ulcers situated above the external sphincter can not be everted and are examined through the speculum—the conical, fenestrated or a Sims' vaginal speculum according to the needs of the individual case. Sometimes the fissure is obscured to vision by a hemorrhoid or by edema of the surrounding mucous membrane, and may not be easily seen until the whole anal wall is carefully searched by separating the anal folds, one field at a time.

Digitally we may find the fissure and determine the condition of its base and edges. When introducing the finger, bear in mind the excruciating painfulness of manipulating an unprepared fissure, and crowd the finger to that segment of the rectum opposite the location of the fissure. Introduce the finger in whole length and examine that part of the rectum above the fissure, as well as around and below it, to determine anything else that is wrong.

These maneuvers are always painful, but may be rendered less so by spraying the anus with cocain solution and by placing within the anus a pledget of cotton saturated with the same.

Sometimes there exists an area of intensely inflamed and hyperesthetic mucous membrane associated with a spasm of the sphincter. This is not a fissure, but its symptoms are the same and it may be easily mistaken for an ulcer.

*Treatment*—There is no such thing as an expectant or palliative treatment for anal fissure. Opiates and sedatives increase the constipation, thereby increasing the injury and pain. Enemas of starch water and opium, lead water and opium and iodoform and oil are worse than useless. When the ulcer is due to syphilis, polypus or papilloma, our treatment is directed to them instead of to the fissure; also constipation or proctitis must be relieved or else the ulcer will soon recur.

Two principles govern the treatment of fissure: 1. Rest. 2. Drainage. Each case must be treated individually to obtain these results.

The bowels should be kept open, if possible, by a carefully controlled diet, or with enemas of olive oil or glycerine suppositories. A small enema of olive oil or glycerine given a short while before the usual time of defecation will soften the surface of the fecal mass and assist in its easy evacuation. Laxatives are contraindicated, or in exceptional instances are to be used guardedly. Salines themselves and the liquid stools they produce are very irritating, as are also the resinous cathartics like gamboge, podophyllin, or aloes.

In recent fissures, before the wound edges are thickened or undermined or before pus borrowing has occurred, local dressings give good results. The anus and, if possible, the ulcer are sprayed with 4 per cent cocain in 1-1000 adrenalin chloride solution and allowed to rest five minutes. A conical, fenestrated speculum is now carefully inserted with the shutter over the fissure; the shutter is withdrawn and the speculum gradually opened, bringing the fissure well into view. The ulcer is now sprayed with cocain, if it has not been reached previously, and then painted with silver nitrate solution 20 grains to the ounce, or with pure ichthylol.



Sometimes this occasions a spasm of the sphincter for a time after the treatment, but this may be avoided by smearing the field promptly with

Ung. Stramonii

Ung. Belladonnæ

Ung. Hydrastal.....a.a.

A cure should be accomplished by this course in two to four weeks and sometimes with only a few treatments. If not obtained within this time the fissure should be treated surgically. When the sphincters are hypertrophied and spasmodically contracted, or the ulcer is deep with indurated and undermined edges, or the sentinel pile has developed, or the muscle wall is exposed, local measures as outlined above are not sufficient.

*Surgical Treatment*—Divulsion of the sphincter muscles is one of the older methods that is still heard of occasionally. Although it does relieve and often cure the fissures, it requires a general anesthetic, produces undue traumatism of the mucosa, sometimes leaves a permanent injury to the sphincter whereby the patient loses the sense of approach of gas or liquid material, and may lose full control of ordinary fecal matter, and sometimes leaves a permanent neuralgia of the anus. It frequently does not afford permanent relief, particularly in fissure in the posterior median commissure, and is passed as not being good surgery of today.

Incision with drainage produces much better results, and unless the sphincter is particularly irritable or the patient very nervous or hysterical the operation can be performed under a local anesthetic.

*Technic*—The patient, after being properly prepared, is placed in the Sims' position if the work is to be done under local anesthesia, or in the exaggerated lithotomy position if under a general anesthetic. A Sims' speculum is inserted and the fissure brought into view. Sinuses burrowing under the mucous membrane are sought with a probe, and when found they should be widely opened. The thickened and undermined edges are carefully trimmed flat and the fissure incised at its base down to the muscle wall, bringing the wound well out onto the skin to facilitate drainage. The edges of the fissure are trimmed away

flat and also those of the incision extending below its lower end, lest they obstruct drainage. The sentinel pile, if present, is carefully included in the parts cut away, and also any papilla or small polypoid growths at the upper end of the fissure, which might fall into the rent and hold the wound apart. Exuberant granulations should be curetted away. The wound is packed with gauze in layers. The upper layers are removed in twelve or twenty-four hours, but the lower ones are left until after the bowels are evacuated to prevent infection of the field. The upper layers of gauze are easily removed, but granulation and blood clots entangle the lower layers and cause pain. This suffering may be minimized by washing the wound while the gauze is in place with warm saline solution and following with peroxide of hydrogen solution. The wound is washed with a mild antiseptic solution each day after the bowels have evacuated, until the field is completely healed, which requires about three weeks. During these dressings the edges must be carefully kept open until the surface, and particularly the upper end of the wound is thoroughly healed, so that drainage may be freely provided.

It is advisable, although not necessary, that the patient keep his bed for a day or two after the operation. The evacuations should be kept free and the movements soft, and after each defecation the patient should take a warm antiseptic sitz bath. There is at times some temporary incontinence following this operation, but this disappears as the wound heals. When the fissure has existed continuously for several months, or when it has been operated upon and has not healed promptly, the possibility of syphilis will call for a blood examination, and also tubercular, anemic or rheumatic factors must not be overlooked.—*International Journal of Surgery*.

## Extracts from Home and Foreign Journals

---

### SURGICAL

#### SEPARATION OF BUTTOCKS.

---

Occasions arise in which the examination of the anus or the contiguous skin is necessary, or some minor operation of the area is indicated, but when, unfortunately, the patient objects to a third person (assistant). At times, as in private homes, assistance on similar occasions is lacking. Being confronted with such a case (the removal of a small external hemorrhoid), I was much annoyed by the falling together of large, soft, flabby buttocks. This disadvantage was quickly overcome by the simple expedient of apply a 2-inch strip of surgical adhesive plaster to each buttock and by a bandage which united the ends in front, pulling the buttocks apart. The adhesive strips are applied about an inch from the anus, transversely to the axis of the body and closely attached to the skin for, say, 6 inches. It is a great relief to the operator to witness how easily the buttocks are separated by this means and what an excellent field this simple method provides. It is painless, quick, cheap, efficient and, best of all, may be applied at any time or place when a roll of adhesive is available.—John C. Siliman, M.D., in the *Journ. of the Am. Med. Asso.*

---

#### STRANGULATED DIAPHRAGMATIC HERNIA.

---

Junior Vitac, of Libourne, Jour. de Med. de Bordeaux, Aug., reports a case of intestinal obstruction with typical symptoms except that the patient could rise from the bed and, indeed, found partial relief from a crouching posture. Exploratory operation revealed a part of the ileum passing through the left diaphragm. It ruptured during withdrawal but the obstruction seemed to be relieved. Buried sutures were placed for an extent of 10 c.m., the peritoneum was flushed and drained. Death ensued the next morning. Necropsy showed that, in addition to the ileum, an intricate mass of transverse colon, loops of small intestine and epip-

loon were involved in the hernia. The hernia had undoubtedly existed for many years if it was not congenital.—*Buffalo Medical Journal*.

---

## MEDICAL

---

### A DOMESTIC REMEDY FOR WHOOPING COUGH.

---

The *New York Medical Journal*, of August 5, 1916, contains a rural remedy for whooping cough, communicated by T. Mark Hovell, of London, to the *British Medical Journal* for July 1st. Peel the cloves of garlic, cut them into thin slices and wear them under the soles of the feet between two pairs of socks (if placed next the skin the pressure produced by walking is apt to cause irritation). The garlic can usually be smelt in the breath within half an hour after the slices have begun to be worn, and the whoop and spasm usually disappear within forty-eight hours. The garlic should be worn for a week or ten days or longer, according to the severity of the case. Among the French Canadians onions are used in exactly the same way. Garlic may also be administered by eating it as a form of bread sauce, made by chopping up the peeled cloves, boiling them in milk, and mixing them with bread-crumbs.—*The Medical Critic and Guide*.

---

### TREATMENT OF CARRIERS OF AMEBIC DYSENTERY.

---

H. H. Dale (*Lancet*, July 29, 1916), describes a number of cases in which a course of the usual hypodermic emetine therapy produces only a temporary disappearance of cysts from the stools. Such cases relapse into chronic cyst carriers. The use of ipecacuanha by mouth seems to have given better results in this class of cases, but it is often impossible to give a thorough course of treatment in this way, owing to the production of nausea and vomiting. A double iodide of emetine and bismuth has been prepared recently and furnishes a salt from which the emetine is liberated only after passage into the alkaline intestinal fluids. Three grains of this salt represent one grain of emetine and are equivalent to sixty grains of ipecac. This preparation was tried by Dale in a



small series of chronic carriers with strikingly favorable results. In the majority the cysts were promptly and permanently removed from the stools. In a few of the patients some nausea was observed, but this could often be prevented by administering the dose with, or immediately after a meal. The daily dose ranged from two to four grains administered in capsules. It is suggested that this new preparation might be employed in small doses repeated every few days as a prophylactic for those exposed to infection.—*Pediatrics*.

## OBSTETRICAL

### TREATMENT OF CANCER OF THE UTERUS.

Donald C. Balfour (Texas State Journal of Medicine, July, 1916), advises early cauterization in early cancer of the uterus, followed immediately by a total abdominal hysterectomy. In a small percentage of the cases the condition of the patient may demand a vaginal hysterectomy as the wisest procedure. For moderately advanced cases the use of heat by the Percy method is best. From the results of this treatment the surgeon must decide whether a total abdominal hysterectomy is advisable and, if so, when. If the patient is a serious operative risk, vaginal hysterectomy should be considered. In advanced cases a determined effort should be made to ameliorate the symptoms and prolong life by heat, radium, etc. This treatment, at times, is rewarded by a result which permits radical operation.—*Pediatrics*.

### PREGNANCY IN FIBROMATOUS UTERI.

The ways of Nature are curious. Very frequently a small plug of mucus in the cervix will prevent impregnation for years, producing practical sterility. On the other hand, impregnation will occur in women whose cervixes are completely occluded—to the naked eye, at least. We lately saw a uterus in which the cervix was completely occluded by a fibroma; it is strange how the spermatozoa could make their way through it—but they did, because inside of the uterus there was a living fetus. The woman was in her fifth month of pregnancy.—*The Medical Critic and Guide*.

## Editorial

---

**PUBLISHER'S NOTICE**—The Journal is published in monthly numbers of 48 pages at \$1.00 a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money order, draft, or registered letter, should be addressed to the Business manager, C. S. Briggs, M. D. corner Summer and Union Streets, Nashville, Tenn.

All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

---

### THE PREVENTION OF CONCEPTION.

---

The following extract is taken from Maurice Parmalee's book, "Poverty and Social Progress":

"One of the most disgraceful things in this country is the drastic penal legislation against the teaching and use of contraceptics. Such legislation is stupid because it displays total ignorance of the laws of population. It is brutal because it stands in the way of relieving the pressure of population upon many men, women and children in the lower classes of society. It is vulgar, because it is inspired by a chauvinistic desire for great numbers."

The above quotation is only too true. If there is any one common source of poverty, drunkenness, immorality, illiteracy, crime, degeneracy and disease, it is the large family; not the large family of the wealthy and the idle rich, but the large family of the poor. In this era of preventive medicine we trace out the cause of a disease, remove the cause and the disease disappears. Unless we learn the cause, we are almost as helpless as our forefathers. Our methods of quarantine are better, our municipal sanitation is more perfect, but the tide of battle runs high in the favor of disease until the cause is isolated. The rapid spread of pellagra through the South and the recent epidemic of infantile paralysis in the North bear witness to this fact. Just as physical disease can not be eradicated unless the cause is found and removed, so also is it hopeless and foolish to try to cure economic diseases—and economic and physical disease go hand in hand—without a thorough knowledge of the source. Settlement houses, juvenile courts,

houses of reform, etc., are but therapeutic agencies for diseases already established. Like other symptomatic therapeutics they do some good, but not much, because they do not fight the cause. We must enquire why our prisons are full, our women prostitutes, our men crooks and criminals, our sons degenerate and illiterate. Of course there can not be any one etiologic source of these economic diseases any more than there is one etiologic source of physical disease; but just as a weakened run down condition of the body is usually the forerunner of disease, so also is the family, weakened and poverty stricken because of large numbers, prone to suffer not only physical, but also economic and moral disease.

So here we see one common cause of the ills to which humanity is heir. Just as tuberculosis occurs oftener in the cheaper, crowded tenements so, too, are crime, degeneracy, illiteracy, drunkenness and immorality, which are the tubercle bacilli of the body politic found in the same districts. Tuberculosis is not inherited, but contracted through association with those who are tuberculous. The criminal, the prostitute, the moral leper are not born such, but become depraved through associations which can not be avoided or through necessity. The large family is forced to live in districts where crime and immorality flourish, and it is this association, coupled with necessity, which often leads one or two members, or the whole family, into the paths of crime and immorality. The unhealthy surroundings also lead to physical disease. We can not hope to control the death rate so long as the birth rate is uncontrolled, and it's folly to hope to educate, clothe and control a family of six when there is not enough money in the home to feed a family of three. Therefore, it would be wise to double the dollar by halving the offspring; educate the poor as well as the rich in the methods of prevention and they will have a chance to educate their offspring in all respects.

The religious say it is a crime to prevent conception, losing sight of the much greater crime of bearing children who are handicapped in the struggle for existence even before they are born. One powerful branch of the Church prohibits the use of preventives in wedlock and yet rewards its celibate members with its highest offices. This is inconsistent to say the least. If

it is wrong to interfere with the course of nature by preventing conception it would seem a much greater wrong to interfere with marriage and in that way prevent conception. All through Nature we see a mating of the sexes, and we also see interference with conception. Even in man and woman at periodical intervals there is a waste of the germ of life. We can hardly err if we follow Nature, and it is certainly better to destroy the germ before fertilized than to allow conception when the product of conception is hopelessly handicapped in the struggle for existence.

Some argue that knowledge of preventives would increase immorality among women. We can not agree with them, since we believe most girls go wrong from ignorance of sexual matters or because of a necessity, which is only too often the result of the large poverty-stricken family.

The law as it stands today is one of the many barriers against the single moral standard of the two sexes; it is a law made by men for men and woman gets the hot end. The seducer does his dirty work at very little risk, while the victim is exposed not only to venereal diseases and chronic invalidism, but also to pregnancy and disgrace. Even granting for the sake of argument that knowledge of the means of preventing conception would increase immorality, it is still true that the law is unfair to women, since it puts all the burden of morality upon her shoulders; it is unfair to women, since it compels her to bear children when she is physically unfit for maternity, and it is still unfair to woman when, through its workings it compels her to sell herself in order that she or her children may live. The law is unfair to man in that it compels him to slave in order to support a large family on a **small** income; it drives him to illegitimate intercourse, since legitimate intercourse means more children when there are already too many. It is unfair to the whole nation, since it stands at variance with one of the principles of our government, "the greatest good for the greatest number."

The economists can fight poverty; the prohibitionists, drink; the sexologists, immorality; educators, illiteracy; criminologists, crime; and physicians, disease, but so long as the seeds from which these evils springs are allowed to fall in abundance in the



fertile soil of the tenement districts we can hope for no permanent benefits, and vaunted national prosperity can only remain a thin veneer, always ready to cave in on the rottenness underneath.

W. T. B.

---

MISSIONARY HOSPITAL WORK IN INDIA.

---

Qualified medical man required who is in sympathy with religious work. Passage paid and small monthly allowance made. Three years agreement. Apply, sending copies of testimonials.

COMMANDER EVA BOOTH,

Field Department, Salvation Army Headquarters, 122 West 14th St., New York City.

---

COMBATting INSECTS AFFECTING THE HEALTH OF MAN.

---

Activities of the Bureau of Entomology of the U. S. Department of Agriculture Shown in Annual Report.

---

Washington, D. C., Nov. 20, 1916—Continued advances in the work of combating the activities of insects affecting the health of man are reported by the Chief of the Bureau of Entomology of the U. S. Department of Agriculture in his annual report recently issued. In mosquito investigation in Louisiana a species of mosquito hitherto considered a non-carrier of malarial infection was proved to be a carrier. Studies have been made of malaria and measures are being evolved to meet plantation conditions.

The "starvation" plan, aimed to exterminate the spotted fever tick of the Bitter Root Valley, Montana, was followed during the year with encouraging success. The plan consists of the removal of the domestic hosts of the adult tick from the infested areas. The Bureau also conducted a campaign of extermination against ground squirrels and other rodent hosts of the immature ticks. Examination of the rodents killed showed 40 per cent lower infestation by the tick than during the preceding year.

The report directs attention to the demonstrations of the Bureau specialists that the breeding of flies in manure can be prevented

by treating the substance with calcium cyanamid and acid phosphate, which at the same time increase the fertilizing value of the manure.

The Bureau also conducted investigations into methods of lessening fly infestation in packing establishments operated under the Meat Inspection Service of the Department.

---

#### WELFARE AND EFFICIENCY CONFERENCE.

---

Attention is called to this letter, the object and interest of which are explained therein. The altruistic aims of such a body are obvious and should be heartily subscribed to by every physician interested in the welfare of his fellow beings:

*Journal of Medicine and Surgery, Nashville, Tenn.:*

GENTLEMEN—I desire to invite you to attend the fourth annual welfare and efficiency conference, to be held in the hall of the House of Representatives on November 21, 22 and 23.

You are probably aware from what you know of our previous conferences that this meeting is to be held for the purpose of improving relations between employers and employes. It is intended also to develop further safe and sane methods of reducing the heavy toll of life and limb which is now taking place in this commonwealth.

These conferences aim to prevent the enormous number of injuries and deaths and to lessen the sufferings of our great army of industrial workers, thus conserving our resources, both human and material. The movement is assuredly worthy of the thoughtful attention of our citizens.

The arrangements for this conference are with the Department of Labor and Industry, which will send you the necessary programs and additional information.

I shall very much appreciate your coming here this year in order that you may join in promoting the objects to be attained, and advancing the welfare of this great Commonwealth.

Very truly yours,

MARTIN G. BRAUMBAUGH.

DENTAL PREPAREDNESS.

---

What is the most important attribute of a soldier?

Good feet?

No.

Good eyesight?

No.

Good brains?

No.

What, then?

Good teeth.

A soldier may have good feet, good eyesight, and good brains, but if he has bad teeth he can't eat. If he can't eat he can't march near enough to the enemy to see him and use his brains to fight him.

How does a soldier get good teeth?

By having good teeth in childhood.

How do children keep good teeth?

Through being taught by their mother how to keep their teeth clean and having their teeth looked after while they are growing. This makes good teeth for future soldiers.

It would seem, then, as though the first patriotic duty of a mother was to keep her children's teeth in good condition.

It is.

---

DEATH OF DR. E. S. MCKEE.

---

It is with profound regret that we announce the death of our distinguished associate editor, Dr. E. S. McKee, who died at Quito, Ecuador, October 20, 1916, from an attack of malarial fever. Dr. McKee was a prominent practitioner of Cincinnati, Ohio, devoting himself to the practice of obstetrics and gynecology. He was for many years a frequent contributor to medical journals throughout the United States and for a number of years was associate editor of the NASHVILLE JOURNAL OF MEDICINE AND SURGERY, in that capacity furnishing editorial papers that were always read with the greatest pleasure and profit by

readers of this Journal. For the last two years he has traveled all over the world, and at the time of his death was on a tour through South America. His death will be a loss not only to the profession of Cincinnati, where he lived and practiced, but to the entire profession of medicine, whose interest and progress he strove so earnestly to promote. The Journal is deeply grieved over his untimely removal and will miss his bright editorials and original articles.

---

NEW YORK SKIN AND CANCER HOSPITAL,  
Second Ave., Cor. 19th St.

---

The governors of the New York Skin and Cancer Hospital announce that Dr. L. Duncan Bulkley, assisted by the attending staff, will give the eighteenth series of Clinical Lectures on Diseases of the Skin in the Out-Patient Hall of the Hospital on Wednesday afternoons, beginning November 1, 1916, at 4.15 o'clock.

The lectures will be free to the medical profession on the presentation of their professional cards.

FREDERICK HASS,  
Chairman of Executive Committee.

---

DO YOU KNOW THAT

---

Walking is the best exercise—and the cheapest?

The United States Public Health Service administers typhoid vaccine gratis to Federal employees?

A little cough is frequently the warning signal of tuberculosis?

Bad teeth and bad tonsils may be the cause of rheumatism?

Unpasteurized milk frequently spreads disease?

The air-tight dwelling leads but to the grave?

Moderation in all things prolongs life?

The careless spitter is a public danger?



## Obituary

---

DR. JAMES M. COYLE.

---

Dr. Jas. M. Coyle, aet. 67 years, a well known practicing physician of this city, died October 21st of intestinal hemorrhage from malignant disease of the pancreas. Dr. Coyle graduated in medicine from the medical department of the University of Nashville in 1882, and at once entered upon the practice of medicine with the late Dr. T. O. Summers, with whom he was associated in a successful business for a number of years. Some months ago he was seized with the illness that eventually carried him off, and he had just returned from a trip to French Lick Springs, where he had sought relief, when he was forced to take to his bed. The death of Dr. Coyle was a source of infinite grief to his warm friends and patrons, of whom there was legion. No physician had stauncher or more loyal friends than Dr. Coyle, and to his patients he was faithful, loyal and attentive. As a physician he was an exemplar. He was genial, courteous and ethical to the letter, and therefore won the esteem and respect of his fellow practitioners. As a father and a husband he was beloved beyond words in his small family circle. As a Christian, he was well known for his faith and loyalty to the tenets of his deligion. His death was a distinct loss to the local profession and he will be greatly missed. Resolutions were passed at the Nashville Academy of Medicine. Interment took place at Huntsville, Ala., his former home.

---

DR. LOUIS McLANE TIFFANY.

---

Dr. Louis McLane Tiffany, of Mount Custis, Va., a graduate of the University of Maryland, School of Medicine, Baltimore, in 1868, and a member of the Medical Society of Virginia, the

Medical and Chirurgical Faculty of Maryland, the Baltimore City Medical Society, and the American Surgical Association, professor emeritus of medicine at the University of Maryland, and consulting surgeon of Johns Hopkins Hospital, St. Joseph's German Hospital and the Church Home and Infirmary, died from heart disease at his home, on October 23d, aged seventy-three years.

## Publisher's Department

---

"Paraldehyd" possesses many of the good without the evil qualities of chloral. Used in insomnia resulting from various causes. The objectionable taste of the chemical is, to a great extent, disguised in Robinson's Elixir Paraldehyd (see advertisement in this issue), which is an elegant preparation.

---

THE FIRST FOREIGN MEDICINE ADMITTED TO THE IMPERIAL  
PALACES OF CHINA AN AMERICAN PRODUCT.

---

BY WILLIAM F. MANNIX,  
President Pacific Associated Press.

---

No nation is slower than the Chinese in the adoption of a new article or device. They hesitate long before setting the seal of approval upon a strange product. "Changeless China" has been an exceedingly trite phrase with Westerners; and there have been some of our writers and publicists who were ready to stake their reputations on the assertion that although the Middle Kingdom had of late called itself a republic the Chinese were nevertheless so firmly rooted to their centuries-old traditions and prejudices that any hope of their soon acquiring modern methods and practices was quite futile.

Really nothing could be further away from the truth than this view. While it is acknowledged that her people are not adopting Western customs wholesale, it is known that in a thousand ways—small, perhaps, but at the same time true criterions—the Chinese are turning to the better things in foreign countries, particularly the United States.

Let us take a particular instance. Ten years ago no Chinese would allow a foreign medical article to come into his domicile, and a Viceroy would visit dire punishment upon anyone in his jurisdiction (not under actual foreign-missionary control) who

would use or urge the use of an alien medicine. Ten years ago, yes, five years ago, to even mention the introduction of a foreign product for medical purposes within the sacred Forbidden City at Peking would mean exile or death to the offender.

Yet within the year an American preparation—Listerine—has not only been made use of by the only two chief executives the Republic of China has had, but has been officially and personally recommended by them to their people! The Empress Dowager, she who ruled China with an iron hand for over forty years, was wont to cry: "Fung kwei!" (foreign devils), and she would have gladly put them all to the two-handed sword. But President Yuan Shih-k'ai declared, and President Li Yuan Hung more than endorses his words, that "Americans and American goods are welcome to our country."

And both of these sattesmen hae taken occasion to give unqualified endorsement to the medical product of the Lambert Pharmacal Company just alluded to—Listerine.

It is likely that President Li Yuan Hung—whom Dr. Morrison, the noted *London Times* correspondent, calls "the brainiest man in China"—was the first prominent Chinese to use Listerine. Not only that, but General Li, who is an analytical chemist of exceptional ability, made tests of this preparation before securing a supply of it for the store connected with his immense workshops at Hankow. Satisfying himself of its great merit by scientific tests as well as by personal use, General Li recommended it to the Yuan household, and it immediately found acceptance and earned praise within the Forbiddn City.

"Yes," said Yuan Shih-k'ai to the writer during a visit to the Palace in November last, "I have been applying this American medical compound to my throat ever since General Li brought the first package, and I have found wonderful relief from a stiffness and soreness of chords and muscles that nothing I had been able to get before would help. Lady Yuan and the family make use of it also, in various ways, and we are quite agreed that it is a daily necessity for our home."

The stateman, who is now President of China, had words of equally high praise for Listerine.



"I can scarcely tell you of all the ways I have made use of this product," said General Li, "but I regard it especially as an antiseptic of a truly noteworthy order. I have it not only in my residence, but it is kept constantly at hand for the calls of workmen in my factories. I look for the time when it will be in every hospital and many homes of China."

Upon leaving the Forbidden City after my talk with General Li, who was at that time Vice President and temporarily a guest at the Presidential Palace, I was resolved to send a cablegram to the Lambert Pharmacal Company, St. Louis, acquainting them with the fact that not only had their product by sheer merit made its way through the tangle of Chinese pride and superstition, but that it had been accorded the highest endorsement of China's foremost statesmen and leaders. However, the message was not sent.

But the story of Listerine in the Palaces of the Forbidden City was told in half a hundred places throughout the Pacific regions during the next three months, and many interesting facts were developed. While President Li and Yuan were probably the most distinguished patrons of the Lambert Pharmacal Company in this vast section of the world, they were by no means the first.

Chief Surgeon O'Barrington, of the British Service at Hong Kong, declared that he could not say too much for Listerine.

"We employ it in all the hospitals that are under my general supervision, Hong Kong, Kowloon, Wei-Hai-Wei, and Singapore," said Major O'Barrington, "and the longer we use it the more uses we find it adaptable for and the better we like it. Personally, I apply it often to my face, particularly after shaving, and very often also I use it as a rub after my bath. It is, to me, very refreshing and beneficial."

Drs. Blakely-Hall, of the British Army, and Gordon, of the British Navy, both of them assistants to Major O'Barrington, endorsed his words on their own account.

"It is a remarkably good antiseptic, and I would like to see the government adopt it for general hospital and field use," said Dr. Blakely-Hall.

In the Philippines American army officers of the line as well as those of the Medical Corps had nothing but words of high commendation for Listerine.

"For a while out here," said Surgeon Phipps, of the Constabulary, "we were unable to procure Listerine except as we might obtain very small quantities of it from the hospitals; but now, in my branch of the service at least, almost every second man is the owner of a package of the Lambert preparation. It is fine for cuts, wounds, burns or sores, and many a case that otherwise might have proven serious has been cured or prevented by an early application of this most meritorious article. My feet, which for a year or more after coming to this hot climate were the bane of my life, are in the best possible condition, and I attribute this to their daily rub with Listerine."

"Half the men of my battalion have Listerine in their army chests—and they rub it on their chests, too," laughed Major Roberts. "Some use it after shaving, others after their bath, still others as a dentifrice and mouth wash. But every man of them rubs his feet good with it at least twice a week." Then the major added, "and I'm sure we have the sprightliest, highest-stepping battalion of infantry in the Islands!"

The Honorable Miss Elizabeth Gregmoore, eldest daughter of Baron Gregmoore, and active head of the Young Women's Domestic Institute at Hong Kong, was in Manila when it was told to her how the ranking ladies of the Forbidden City had become patrons of Listerine.

"That's a splendid sign of the times," said the Honorable Miss Gregmoore. "I trust that its use will become general among the women of China and that it will put an end to the horrible face-painting. In our institute we allow the girls to employ only Listerine as a skin softener and preserver and a pure talcum powder—also an American product."

The Young Women's Domestic Institute over which Miss Gregmore presides is the most exclusive school of its kind in Asia, and is conducted on the most careful and scientific lines. Young women attend it from points as far distant as Manila, Shanghai, Peking, Hankow and Seoul, Korea.

If one might very reasonably expect to find Listerine almost everywhere in the Philippines one would not on the other hand, look for it in the medicine boxes of the South Sea steamship lines. Yet on the ships both of the Australia-Zealand and the York Peninsular routes Listerine is ever ready for the calls of passengers.

"Listerine?" asked Medical Inspector Toddman, of the Australia-New Zealand line. "Why it is an *American* product?" And he winked to those standing about, some of whom he had just supplied with that article. "Oh, well, I never looked to see; I *only know* that it is the finest thing in the world for that ocean-sunburn we have so much of down here, and that every passenger who uses it wants to know where it may be obtained ashore. Of course I tell them, and at the same time add a probably unnecessary word of personal recommendation."

And thus it is seen that President Li Yuan Hung, of China, is not Listerine's only friend in the wide borders of the Pacific. Though it was through and by him that this famous American article was introduced within the holy precincts of the Forbidden City and that it became the *first foreign medicinal product to be used within the ancient imperial Palaces*. And it was by the telling of this very interesting fact that all these other items were brought to light.

All of which goes to show that a worthy story on a worthy subject will bring its own regard; just as Listerine, because it is meritorious, has made and undoubtedly will continue to make high and notable friends across Pacific seas.

---

#### HARD DRY FECES.

---

"Interol" is suggested as a means of overcoming this difficulty, and a hard, dry fecal mass is indeed a difficulty, because "Interol" has several points in its favor.

In the first place, it becomes part of the intestinal contents as they emerge from the cecum into the colon. It is thus mixed with them, and covering them. Under its influence, feces can not become hard and dry. The colon may absorb all the *water* it wants,

but "Interol" remains with the mass all through its colonic and rectal journey, finally lubricating it past the sphincter ani, during the defecation act.

By so doing, straining at stool, which is an invariable accompaniment of hard, dry feces, no longer is a necessity, and herein lies the value of "Interol," not only as a fecal softener, and lubricant, but as a prophylactic measure in the prevention of the many *physical* sequelae of straining at stool, including hernia, hemorrhoids and prolapse (rectal and uterine.)\*

---

#### CONTROLLING THE NERVOUS ELEMENT IN FEMALE DISEASES.

---

Utero-ovarian congestion, traceable to extreme irritability of the local nervous mechanism, invariably requires appropriate antispasmodic treatment. Obviously great care, however, must be exercised in selecting the measures to be employed. Among the sedatives that have been found serviceable, none has proven more effective or given more uniform satisfaction in every particular than Peacock's Bromides. Many clinicians have learned to appreciate the antispasmodic properties of this preparation, and as a consequence Peacock's Bromides have long filled an important place in gynecologic therapeutics. Efficient, reliable and remarkably free from any unpleasant effects, this dependable combination of carefully selected bromide salts is of exceptional utility in female disorders in which the nervous element is prominent. In these conditions, it can be used with every confidence, not alone in its therapeutic efficiency, but what is often quite as important, in its notable freedom from gastric disturbance or other unpleasant effect. A particularly gratifying feature of Peacock's Bromides is its capacity to relieve pain and discomfort without inducing a drug habit, a result which the opiates and so many many other pain relieving remedies all too often produce. Pea-

---

A 4-page circular on "Hard Dry Feces" sent on request. Also 4-page circular on "Straining at Stool," or Interol-Lubrication booklet. Van Horn & Sawtell, 15-17 East 40th Street, N. Y. C.



cock's Bromides surely fill an important place in the therapy of the painful ills of womankind.

---

#### SLUGGISH, OVERLOADED BOWELS.

---

When the bowels are sluggish and overloaded, the whole system is usually depressed and deranged by the retention of toxic waste material. Without delay it becomes necessary to increase the activity of the bowels and promote regular evacuation of their contents. For these purposes there is no remedy that will give more prompt and satisfactory results—with such freedom from griping or after-effects as Prunoids. One to three at bedtime will afford prompt relief—without the usual cathartic discomfort—and rapidly restore functional regularity of the bowels. As one prominent physician has said, "I use Prunoids because it *regulates* as well as *evacuates* the bowels." Samples will be sent on request to the Sultan Drug Company, St. Louis, Mo.

# NASHVILLE JOURNAL — OF — MEDICINE AND SURGERY

CHARLES S. BRIGGS, A.M., M.D., Editor.

W. T. BRIGGS, B.A., M.D., Associate Editor.

---

VOL. CX.

DECEMBER, 1916.

No. 12

---

## Original Communications

---

### THE INCREASE OF CANCER; SOME THERAPEUTIC AND PROPHYLACTIC DEDUCTIONS.

---

BY DR. A. F. PLICQUE,

---

(Translated from the *Journal de Medecine et de Chirurgie  
Pratique*, October 10, 1916.

The formidable and continued increase of cancer is one of the saddest and most important facts of contemporary clinical medicine. Analyzing the paper of Dr. Liantier, of Lyon, on the actual state of the treatment of cancer, a recent article of this journal (No. 25080) shows that in France, in a period of twenty years, the mortality from malignant tumors had much more than doubled

In his book, in which statistics on the mortality of cancer have been carefully compiled, Fred L. Hoffmann\* estimated at 500,000 as the annual number of deaths from cancer in the civilized countries. For all countries the annual average mortality in the five-year period from 1906 to 1910 reached 74.3 per 100,000 inhabitants.

---

\*The mortality from cancer throughout the world (Newark, N. J., the Prudential Press, 1915).

In Switzerland, a country where cancer is most prevalent, this proportion reached 128.3 (in a period from 1901 to 1905), 125.9 (in the time from 1906 to 1910).

In Holland, in the period from 1906 to 1910, the annual mortality reached 103.5 per 100,000 inhabitants.

In the United States the number of deaths noted annually as resulting from cancer, reach 80,000. It should actually be more considerable. With the progressive increase of cancer, the mortality of this disease will, in a short time, certainly equal that of tuberculosis.

These statistical figures have already been noticed in the bibliography (article 25084) devoted to this important work. From a practical viewpoint it is possible to deduce from these a certain number of instructive details having relation to—

(1) The precancerous stage; (2) the difficulty of early diagnosis; (3) the influence of occupation; (4) the role of traumatism; (5) the effect of the dietary regimen and the immunity of vegetarianism; (6) the relation of cancer and goitre; (7) the parasitic origin of malignant tumors; (8) appendicitis with cancer; (9) the part played by the following diseases: Obesity, alcoholism, syphilis, gout, rheumatism, and diabetes; (10) the influence of tuberculosis and malaria. From a therapeutic point of view, quinine seems to possess a real efficacy. It is perhaps its frequent employment that explains the immunity of malarial regions.

I. *The Precancerous Stage.* A chronic, low grade of inflammation, irritation produced by pressure or repeated blows, an hyperplasia, a cicatricial tissue often precedes and favors the development of cancer. Keen and Bloodgood have reported sixty-five cases of moles which had undergone cancerous transformation (the malignant nature of the growths having been verified after removal.) Sixty-six cases of a similar nature removed at the first indication of cancerous development showed neither a tendency to return nor ultimate death from general involvement.

According to the statistics of Mayo, cancer of the stomach is in 60 to 70 per cent of cases preceded by an ulcer. It develops either at the site of an active ulcer or upon the cicatrix of an ulcer which had undergone cure. As for cancer of the biliary passages,

it will invariably be preceded by and caused by lithiasic calculi acting as foreign bodies. Hoffman incidentally remarks upon the considerable increase of mortality from biliary lithiasis. Even aside from its role as a local irritating agent, this disease seems to advance as to frequency along parallel lines with cancer. A deduction of practical importance has been formulated by Ewing: "Advanced cancer is incurable. Localized cancer may be eradicated. But the disease can certainly be relieved by treating it in its incipency."

Precancerous lesions can usually be relieved by simple and non-dangerous operations. At times they can be relieved by a mode of treatment even less violent. In case of persistency, stomach ulcers, warts, fissures and plaques of the tongue, ulcerations of the cervix, pigmented moles and benign tumors ought always be removed with the conviction that such is the best means for preventing their frequent degeneration into malignant growths. Of the uterus, simple tumors, chronic inflammation of long standing, inveterate ulceration, erosions resulting from neglected lacerations of the cervix, are frequently lesions that precede cancer.

Ewing attaches great importance to chronic catarrh and erosions of the cervix. As to the body of the uterus he regards the most important predisposition as furnished by myomata and especially by fibromata enclosed within tissues analogous in structure to embryonic tissue and to that of the umbilical cord and of the vitreous humor.

Prophylaxis will consist in methodic study and attentive treatment of these lesions. The prophylaxis is above all to be directed to the local lesion. General measures of treatment, as a possible course, are to be adopted only as secondary means.

II. *The Difficulty of Early Diagnosis.* Early diagnosis is difficult, but is of the greatest importance. We give some of Cullen's opinions: "For the milky plaques of the tongue in smokers, excision effects a complete and lasting cure. Left to themselves without interference, they degenerate unquestionably into cancer. In epithelioma of the lip, ablation affords every chance of cure without recurrence."



Cancer of the stomach is in general diagnosticated too late for useful intervention. If, for example, the classical symptoms are awaited, lesions far too extensive are encountered. Fluoroscopic examination often suffices to give warning in good time. But the suspicion of cancer should be verified without delay by exploratory laparotomy, the only way of knowing positively whether cancer is present or not.

In cancer of the intestine obstructive accidents are often manifested at an early period. When they occur, a presumptive diagnosis can be made and early intervention followed.

Cancer of the rectum and of the sigmoid flexure of the colon can be recognized by the use of the proctoscope.

In cancer of the breast, adhesions to the skin (the orange peel skin) are pathognomonic, often sufficiently precocious.

III. *Occupational Cancer.* The part played by occupations, shows clearly the result of local irritation. Cancer is of particularly frequent occurrence, (1) in chimney sweeps, the soot containing sulphurous acid, ammonia, and even arsenic; (2) in gardeners, who sprinkle their plants with soot. (In this instance localized upon the hand.) (3) in workers in coal tar, paraffin, anthracene, pitch and in less degree the distillation of benzine and creosote; epitheliomata of the cornea have been remarked as instances of particular localization; (4) in the industries for the production of fuel, oils and turpentine; (5) in all the occupations dealing with alcohol. It is due to the forced abstention from alcohol that cancer is of remarkable rareness in prisons and lunatic asylums; (6) in miners in which it exercises especial predilection for the lungs; (7) In breweries where charcoal is handled freely and as a result exposure to the dust of soot is constant. Besides sulphurous acid is used to preserve the hops; (8) in boatmen upon steam vessels (smoke, soot); (9) in workers in tin (sulphuric acid), in lead (especially in the case of workers in galena, or sulphate of lead), in rubber (sulphuric acid, alum), in general in all chemical industries; (10) by the action of the x-ray, of radio-active substances and perhaps even by prolonged exposure to a brilliant light.

The action of these different causes shows that cancer should be without doubt regarded as frequently of occupational origin.

IV. *Relation of Cancer to Traumatism.* While occupational influences are important and incontestible, the role of traumatism is even more fully discussed by Hoffman.

In many of the published cases, mistakes are apt to have been made from the inveterate tendency of the human mind to explain a local lesion by attributing it to a local cause. He cites the statement of Williams: "It is commonly held that cancer is the result of injury."

Now men are three times more subject to traumatism than women, yet men are affected with cancer about half as often. The value of this objection is somewhat diminished by the fact that the greater frequency in women depends solely on the very frequent localization of cancer in the breast and the womb.

From the point of view of legal medicine and accident indemnity, Thomas Oliver recommends at all times an extreme caution before admitting traumatism as a cause. To accept it, not only is it necessary to have an accurate history, but a minute examination of the tumor when removed. Very often it is discovered that a tumor regarded as primary and of traumatic origin is in reality due to the metastasis of a cancer deeply placed and of long standing.

However, traumatism as a cause of cancer will be often invoked. In his exhaustive analysis of cancer by regions, Hoffman gives the following:

Of 32 cancers of the bladder, four were probably of traumatic origin.

Of 314 cancers of the breast in women terminating in death, traumatism was probable forty-four times.

Of 89 fatal cancers of the liver (males), eight were due to injury.

Of 184 cancers of the liver (women), six were of traumatic origin.

Of 18 cancers of the pancreas ((males), 2 traumatisms.

Of 281 cancers of the stomach (males), 19 traumatisms.

Of 326 cancers of the stomach (female), 8 traumatisms.

Of 401 cancers of the uterus, 8 traumatisms.

Of 56 fatal cases of cancer of the skin (males), 14 were probably of traumatic origin.

These figures are the more significant, as L. Hoffman inclines rather to reject the theory of the traumatic origin of cancer.

V. *Cancer and Diet.* Vegetarianism lessens very much the frequency of malignant tumors, but does not suppress them entirely. These tumors, moreover, are met with though rarely in herbivorous animals. Cancer from external irritation (chimney sweeps cancer), may occur as a matter of course whatever the diet. Diet seems to exercise a well assured influence on cancers of the stomach and digestive apparatus.

When cancer has occurred, the avoidance of meat and the adoption of a lacto-vegetarian diet often retards its progress.

In cases of intense anæmia, a common complication in all visceral cancers, the suppression of meat diet will sometimes increase debility and anæmia. In India, according to life insurance statistics, the mortality from cancer is low among the European immigrants (3.93 per cent of deaths). It is practically negligible and almost nil among the natives, which seems to be due to their sobriety and to food poor in proteins. Cancer of the stomach is nearly unknown among them. Nearly all the cancers met with are external, with a predilection for the male genitals. Of 1589 cases of cancer recorded in India and analyzed by the *Imperial Cancer Research Fund*, 1513 were found on the surface of the body and 76 only in the internal organs.

This predominance of the vegetable diet seems to explain the infrequency of cancer in Japan, in Corea, in China, in the Philippines, in Siam and in Egypt. In Egypt and in North Africa cancer is nearly unknown among the Arabs and the people of the Soudan who live upon a vegetable diet. Practically it is only encountered among the Copts and Arabs who have to a greater or less extent adopted the European mode of living. Civilization brings with it a tendency to abuse, to excess in eating, in alcoholic drinks and coffee. It is worthy of remark that the consumption of meat progressed in parallel lines with the increase of cancer and that of biliary lithiasis. It has more than doubled. With people who live a savage life in the open air, it is noteworthy that

the large consumption of meat, and even of alcohol, seems to lose the influence it has in favoring cancerous formations. In 1910 the cause of deaths was very carefully established in 886 deaths of Indians from the far west, nine deaths only were due to malignant tumors, of which six were found in the stomach or liver. By way of contrast 1055 deaths among Chinese residents of the United States were studied. Of these, forty-four were caused by malignant tumors or a proportion four times greater.

Our overcivilized mode of living seems then to have the unfortunate privilege of being also unlucky for cancer as it has for tuberculosis and for lunacy.

VI. *Relation of Cancer and Goitre.* On the subject of goitre, L. Hoffmann begins by calling attention to the important work of Ch. Repin of the Pasteur Institute in which he demonstrates that thyroid hypertrophy is only the reflex of general nutritive disturbances, a trouble brought about by goitre-producing waters, and is without doubt a provisional means of defense against a breakdown of nutrition. He cites very curious observations made in the artificial culture of trout. Among fish endemic goitre or cancer of the thyroid gland is observed to take place under the influence of certain waters. This disease at times occurs spontaneously in fish living in liberty in places where they abound. Fish living in a wild state and absolutely healthy contract it when they are placed in establishments in which the disease is endemic. The frequency of the disease is so often noted in the salmon that it can be called epidemic. The disease in the majority of cases behaves not like simple hypertrophy but like malignant tumors—true cancer. It does not seem that anything indicates the possibility of direct transmission from a diseased fish to a healthy one. The multitude of cases point to an identical cause. Repin regards these goitre-producing waters as true mineral waters which powerfully modify nutritive changes. These waters impregnated with lime, retard metabolic changes. They create artificial arthritism. On the contrary the waters charged with soda accelerate the changes whence their employment in the treatment of rheumatic manifestations. This effect of modifying nutrition, explains another fact of the greatest importance: the an-



tagonism of these goitre-producing waters to tuberculosis or more accurately speaking, to fever and to tubercular consumption.

This influence over organic changes, whether to retard and render less active tuberculous processes or to favor and activate malignant diseases is in no way contradictory to the infectious origin of these two diseases. The modifications of the soil can, indeed, according to the special germ involved, exercise an influence either favorable or unfavorable.

In spite of the originality of these views and of their great practical interest, these ideas of Repin on the utilization of goitrogenous waters in the treatment of diseases with exaggerated nutrition (exophthalmic goitre, tachycardia, tuberculosis, etc.), were too little noticed in France. Justice appears to have been given to them at last in the United States.

VII. *The Parasitic Origin of Cancer.* Hoffman discusses very thoroughly this difficult question as well as that of families or of localities (houses, streets, villages) where cancer is especially frequent.

In his summing up he inclines to the negative view. He cites a number of interesting objections to the theory of a specific parasite.

First of all this parasite is not known to be the same for sarcoma and carcinoma. Were this so a carcinoma could, under certain conditions, be transformed secondarily into carcinoma and inversely, a process that is never known to take place.

In reality for the parasitic origin to be true it would be necessary to have a special parasite for each one of the innumerable varieties of tumor corresponding to the different cells of the economy, for each has its metastases of a fixed type.

It should even be supposed that for each animal, there should be a separate and distinct parasite. All animals, superior or inferior, have their multiple and very characteristic tumors. Nothing is more difficult than grafting tumors of a certain kind upon an animal of a different species, though the grafting will succeed with animals of the same kind. This fact is opposed to the theory of a common parasitic origin.

The communication of a cancer from a patient to a healthy person seems very doubtful. Contagion in married couples is in particular shown to be so rare that the several published observations and poorly demonstrated cases in a disease that is so common, can be explained as a simple coincidence. If cancer were an infectious and contagious disease the report of conjugal cancers should be numerous and easily demonstrated, the couples being nearly always at an age favorable for the development of the disease.

L. Hoffmann lays particular stress upon the immunity of surgeons in operations for the removal of cancer. He does not know of a single case contracted in the course of an operation. These accidents are on the contrary frequent in contagious and infectious diseases, particularly tuberculosis.

However, a reservation by Rodman is mentioned: "If ulterior researches and in particular the study of the blastomycetes prove the parasitic origin of malignant tumors, it is certain that the nature of their parasites will differ essentially from other animal or vegetable entities that go to make the contagious element in the best marked infectious diseases, such as typhoid fever and diphtheria."

The immunity of nurses who, for a great length of time, attend cancerous patients, is the same as that of surgeons.

In France\* since the works of Albarran, Ch. Repin and Leroy, the infectious nature of cancer is generally admitted. Its contagious power seems very little, but the soil that receives it is of greater importance than perhaps the parasite. Very early surgical intervention under this particular teaching should be undertaken in order to eradicate, and eradicate completely, the focus of extension and secondary metastasis.

After operation, a special diet consisting of vegetable food for the most part (to the exclusion of meat and irritating ingesta), and certain medicines kept up for a long time, such as arsenic, magnesia and quinine have, by modifying the soil and combatting recurrence, a real value.

---

\*Dr. A. F. Pliquet—Popular System of Practical Hygiene—Plon-Nourrit, Editors, p. 157.

In every case, as soon as a cancer has ulcerated, very rigorous antiseptic measures become necessary. We should fear not only the specific contamination but the common dangers incident to the micro-organisms of pus.

VII. *Cancer and Appendicitis.* Primary cancer of the appendix was for a long time regarded as very rare. The statistics of 40737 autopsies at the general hospital of Vienna give only two cancers of the appendix out of 343 cases of cancer of the digestive tract.

Since removal of inflamed appendices and histological examination of the parts removed have become very frequent, the records of cancerous appendices have been multiplied.

This form of cancer, contrary to what would be expected, was observed, not at an advanced age but between 10 and 20 years. Of 69 cases, 58 (or 86 per cent), were found at this age.

This infrequency seems to be much greater than one would presume when the frequency of irritation and the presence of appendicular calculi are taken into consideration. The part played by these enteroliths does not have the same importance as that of lithiasic obstructions in cancer of the gall bladder and the bile ducts.

Benign tumors of the appendix seem to be absolutely exceptional, a circumstance in favor of indication for operation.

The proportion of cancerous degenerations is 0.5 (20 out of 5000) chronic cases of appendicitis operated upon. The mildness of symptoms that present in the chronic form of the disease, makes the excision of the appendix more exceptional. Local extension is often intense, but metastasis is rare. L. Hoffmann does not mention the possible role of meat diet and its abuse to explain the increasing frequency of inflammation and cancer of the appendix.

IX. *Influence of Obesity, Alcoholism, Syphilis, Gout, Rheumatism and Diabetes.*—Obesity occurs very often in connection with cancer. This is the result of high living and in particular of the abuse of hydrocarbons and of fermentable food. Like alimentary excess and obesity, it is rare in infancy, rare after the age of 65 years.

*Alcohol* acts as a local irritant (chronic gastritis preceding certain cancers of the stomach) and as interfering with nutrition. Yet in the statistics of Bade, alcoholism in 1904 was found in only 7.5 per cent of cancer and 6.25 per cent in 1906.

*Syphilis* was often accused of causing cancer. Yet of 325 females affected with cancer and questioned as to syphilis, one only was found syphilitic. In another list of statistics of 160 cases of uterine cancer, one only had had syphilis. It does not appear, however, that this clinical investigation had been controlled by the Wassermann test.

*Gout* was also regarded as a predisposing cause of cancer. Nutritive troubles and particularly the disturbance of metabolism due to the uric acid excess which accompanies them, fortifies this opinion. There remains a contradictory fact. Gout has become very much rarer in England. Its typical form, very common 30 years ago, has almost disappeared. The mortality from gout in man was 3.7 in 100,000 in 1891. In 1910 it had diminished one-half. In this same period the mortality from cancer showed 51.8 to 85.7 in 100,000. From this a change in the morbid history of gout must be admitted.

*Rheumatism*, if by this name is understood the vague manifestations and poorly understood joint inflammations, is frequently met with in cancer patients. Acute articular rheumatism is rare as a forerunner of cancer. It is not the same as from chronic rheumatism or from a sojourn in a low, marshy locality exposed to overflow. In one-third of the breast cancers, this exposure to humidity was clearly demonstrated.

*Diabetes*—Of 200 deaths analyzed by Frerichs from this disease, cancer was the cause of death in six cases. Following are named the parts affected by the malignant tumors in forty-nine cases in which cancer was found: Breast 18, mouth 12, stomach and liver 12, rectum 2, colon and ovary, each one case. Fibrous degeneration of the pancreas will be met with in 50 per cent of diabetes but without a tendency to malignant evolution. It is then remarkable that the increase of mortality from diabetes parallels that of cancer.



X. *Influence of Tuberculosis and Malaria.* Tuberculosis has been regarded as sometimes preventing and sometimes as favoring cancer. Cancer occurs very seldom in active tubercular processes with a tendency to caseous degeneration. It is frequently encountered in cured cases of tuberculosis at the site of areas where it had existed, sclerosed spots and cicatricial remains. The excessive use of meat as food appears in some cases to contribute to this frequency as it had been at the same time the means of cure of the tuberculous process.

The antagonism of malaria to cancer is best demonstrated and most evident of all. In New Zealand the comparison of different districts seems to be conclusive in this particular. The fact is the more significant as humidity without malaria appears on the contrary to cause predisposition.

Jabouley, in France, insists strongly on this relative immunity of malarial regions. His explanation of this fact is of great therapeutic interest. The inhabitants of these regions take quinine regularly as a preventive or as a cure of malarial troubles. Now quinine possesses a palliative effect in the treatment of certain cancers, even when well established and far advanced as a lesion. When the removal of the malignant tumors has been done as a radical measure, quinine given for a long time will prevent early recurrence. This explains the antagonism to malaria but does so in an indirect way.

## Selected Articles

---

### SURGERY AND THE SURGEON.

---

BY DR. ALFRED BROWN,

Candler Building, Atlanta, Georgia.

---

Every last one amongst us appreciates the great importance attached to the earnest attempts that are constantly being exercised to enrich the profession as a whole in regard to the acute and chronic conditions that occur in the abdominal cavity.

I especially emphasize acute conditions because it is to this class of cases that the uneasiness or anxiety of the family and friends request the family physician to call a consultant. And right here is where in a great many cases all chances for the patient are exploded. It so often happens that the consulting surgeon accepts the diagnosis of the existing malady already made by the physician in charge, and that the only province over which he thinks he holds any jurisdiction is to operate, or in other words open the abdomen and look in.

This attitude of mind I do not hesitate to say is not only bad for the patient, but is the cause of so many unnecessary operations, and one of the direct causes of so much criticism being hurled upon our profession by the press.

In our daily papers we read often: Mr. or Mrs. So and So died following an operation. Literally this is true and the public usually accepts this as it is written, never making any distinction between a preëxisting cause and an amateur surgeon, thus accounting for the vials of wrath that are constantly poured upon the profession of surgery.

And, gentlemen, in spite of all this, almost every progressive physician desires surgical consultation in all cases that do not readily respond to ordinary medical or hygienic treatment. So often he hesitates to do so because from his past experience he

feels that his colleague will offer no other plan than that I have already referred to: make an incision and look in. It is generally believed by all that a surgeon has a better understanding of morbid processes that are taking place within the body, and that he also possesses a greater appreciation of the ultimate result of this perverted physiological action. But we also know that most of them hesitate to make any definite statement or suggest medical treatment or give any encouragement until they are permitted to explore and determine the exact condition existing therein.

Here lies the stumbling block to our progress. This is the obstacle that must be removed, or in other words this is the missing link between the internist and the surgeon. Until the surgeon reaches a higher degree of efficiency as a diagnostician, until he is able to offer an opinion worth while or something other than the usual immediate operation, and until he has learned that the scalpel is not to be used every time some patient has a stomach ache the old family doctor will continue to believe that it is to his and his patient's welfare to seek assistance elsewhere.

Let us in as few words as possible take into consideration our foundation upon which we build our argument relative to making a diagnosis and instituting proper treatment or proper advice. You will bear me out that a careful, accurate and complete history of the patient's past and present medical, or surgical life, along with a practical understanding of its significance, rarely, if ever, will such a history fail to point out a route for further investigation. Any omission of detail will in some instances distort our clinical picture and would be very apt to throw the diagnostician off the right track.

A careful physical examination and its value is so well understood and appreciated that to enter into any detail as inspecting, palpating, and percussing, is entirely unnecessary. We all make these examinations very well and so far as the library is concerned it seems to come to some satisfactory conclusion. Perhaps we might here include the laboratory. This, gentlemen, while very essential, has in many cases only a limited value and in the hands of a student is worse than useless, as it will invariably lead him astray. I wish here to emphatically emphasize that a leu-

cocytosis develops very little definite information. One urinalysis showing the presence of albumin is not sufficient to make a diagnosis of Bright's disease, nor is the presence of glucose one time an indication of diabetes any more than a diagnosis of syphilis because the patient is a negro. Much less are we justified in subjecting a patient to an abdominal operation because he shows an increased white cell count. As absurd as this sounds I have seen it done repeatedly.

A diagnosis made on physical signs alone will very often stand and when these cases respond to ordinary treatment or the proper operation performed all goes well.

The so-called therapeutic diagnosis is the big stick of the old-time doctor, and one with which he very ably defends himself and defies all comers, and the method we so often find ourselves adopting as we grow older in experience. Experience is a great teacher if we profit by it, even though our schools condemn any such practice.

What then, must be done? So far in our discussion I have mentioned very little but what can be found in any medical library and so far we probably have disposed of the majority of our cases, and in a satisfactory manner. It is to the balance of our cases that I wish to allude, which includes all those cases where a positive diagnosis is not only difficult but almost impossible to make, and what concerns the doctor more than anything else is whether or not the patient is improving or gradually getting worse? Is an operation indicated; will it do any good if performed?

It is at this point that we need the help and support of our colleague, and it is also at this point that we need the assistance of a surgeon whose enthusiasm for using his scalpel has dwindled down to good sound scientific judgment and conservatism. If he is well informed and has had good surgical training he does and has a right to know and better appreciate the significance of the character of the pulse and its variations, the cycle of the temperature curve, the laboratory findings and its significance, and the changes that have taken place in regard to their relation to each other. Last, but very important, and I especially wish to



emphasize and can only be learned by observation, is the general appearance of the patient, the expression of the face, their position and their attitude toward what has been their life interests. These points taken collectively and when properly understood, present a picture that will rarely if ever lead you astray, and when such a picture is presented or placed before the eye of a surgeon, mellow with experience and possessed of good sound surgical judgment, any doctor will not only find solace and consolation, but good genuine information, the brand he has been seeking, and in such a surgeon the medical profession and the whole populace will and must then and there only, place their confidence.

Perhaps I speak too positively, and perhaps I eulogize our seniors in excess of their merit, but any physician that does ever so little practice will agree that the number of people going about with the scars of abdominal incisions that have received absolutely no benefit and in many instances much worse off from the ordeal they were subjected to, and are condemning our profession are gradually on the increase. This condition, gentlemen, did not exist until the country became flooded with the spirit of surgical enthusiasm extending to the point of fantasy, and today the belief appears to be getting more general that every woman, regardless of age, suffering from any menstrual disorder should have their ovaries resected, and woe unto him who should be so unfortunate as to have an abdominal pain, regardless of what might be the cause. According to present opinion now being propagated none amongst us would care to be accused of giving such a patient any medication—we must immediately transfer them to a hospital and operate.

When it comes to a final decision it would be far better to operate a dozen times unnecessarily than to commit the grave error of overlooking one. But in the light of present times mistakes should be few, and would be fewer if we were more exacting in our deductions and placed more confidence in our ideas and observations. So often we disregard the information that we have derived from our experience to accept some wild-cat idea that is given us through various sources. Perhaps these ideas are prop-

agated in good faith, and when confined to the community in which they are inspired may be of some value. But in this fair land of ours, and amongst a people that are still living for the joy of assisting mankind we should exercise a great deal of discretion before accepting every idea that has its source in a highly commercialized community.—*Journal-Record of Medicine*.

## Extracts from Home and Foreign Journals

---

### SURGICAL

#### THE FATE OF PATIENTS WHO HAVE HAD STONES REMOVED FROM THE KIDNEY.

---

Sir John Bland Sutton (*The Lancet*, July -, 1916), says that the conservation of a disorganized and septic kidney exposes patients to the risks of future suffering from recurrent calculi. This entails repeated operations and finally removal of the kidney under adverse conditions. Endeavor to save such damaged kidneys are not examples of cautious surgery, but rather glaring instances of surgical timidity. We are all more or less influenced by a wholesome respect for renal tissue. We know, too well, that some men get on in the world with very little brain; some with none. But no man can live without a certain amount of kidney. Some push this witticism too far. Many patients suffer much discomfort, even misery, from a timid nephrotomy when their best interests demand bold removal of the disorganized kidney. When a kidney is septic, calculous, and disorganized, if its companion is normal, the diseased kidney should be removed. He has watched many patients, men and women, who had led vigorous lives after nephrectomy for calculous pyonephrosis.—*International Journal of Surgery*.

---

#### THE USE OF HEAT IN THE CONTROL OF INOPERABLE CANCER

---

Dr. C. E. Tennant (Colorado Medicine) considers heat one of the most effective therapeutic means in the control of cancer, provided it is properly applied. The subsequent use of the x-ray with cross-fire applications of the rays from a hard tube is no doubt good after-treatment. The source of the heat may be varied from hot water to the actual cautery, but it must be constant, long continued and free from insulation, in order so spread evenly a temperature of 120 to 150 degree Fahr. throughout the

mass. In applying the treatment of carcinoma of the pelvis or other easily-accessible structures, the Percy cautery irons are probably most satisfactory. The abdomen, as Percy advises, should always be opened in lesions of the cervix and uterus, and the assistant's gloved hand should grasp the uterus in order to determine the position of the iron, the location of the lesion, and the degree and diffusion of the heat into and about the uterus. The limit of tolerance to heat of the gloved hand is below the point of heat at which necrosis of the tissues occurs, and this temperature tolerance is somewhere about 120 degrees Fahr. The use of heat with the Percy irons as a method of treatment is proving very satisfactory in the inoperable cancers of the lip, face, neck and breast, and is considered worthy of use as a preliminary treatment in border-line cases of this class, as well as in pelvic lesions. This should be followed later by radical excision, thereby doing away with the possibility of metastatic recurrence.—*Medical Progress.*

---

#### THE TREATMENT BY RADIUM OF CARCINOMA OF THE PROSTATE AND BLADDER.

---

Benjamin S. Barringer gives the results of his experience with this form of treatment, and states that problems presented by bladder and prostate carcinomas are so entirely different that they must be considered separately. He gives the technique of using radium in both conditions and reports of cases, and offers the following summary: By means of radium we have caused the rapid and complete disappearance of two bladder carcinomas out of nine treated. These cases were carcinomatous by cystoscopic appearance and microscopic examination. Time only will tell whether these patients are cured. In one case of prostatic carcinoma, treated for six months, the carcinoma and the symptoms have markedly retrogressed. In another case, treated three months (possibly borderland), the symptoms have improved. Of three other patients treated, one is dead, one has only recently been treated, and one is doing a full day's work but could not be reached for examination.—*Medical Record.*



THE SHOCKLESS OPERATION.

---

P. Lockhart Mummery (*Lancet*, July 1, 1916), points out that the shockless operation does not seem to have received the attention from English surgeons that it deserves. Very few surgeons in Great Britain appear to be using the method at present. Sir Berkeley Moynihan advocates it as a routine measure, but still apparently uses ether as the main general anesthetic. Col. H. M. W. Gray has also adopted this method and has advocated it in a recent paper. The present war has interfered very seriously with all advances in surgery which have not a direct bearing upon the treatment of the wounded, and a somewhat elaborate technic, such as is here involved, is doubtless very difficult of application on the field. This is to be regretted, as the condition of seriously wounded men requiring immediate operation is one particularly predisposing to shock.—*International Journal of Surgery*.

---

THE VALUE TO THE OPERATING SURGEON OF A THOROUGH  
UNDERSTANDING OF THERAPEUTIC AGENTS.

---

Albert Vandever, in giving his opinion on this subject before the American Therapeutic Society, considered that in general surgery the men of the future who accomplish success will be those who give the best that is in them to the study of surgical bacteriology. He expresses regret for the tendency of some of the younger men in the profession to lose interest in their cases when once they have touched upon a surgical lesion and consider the case but fit for the surgeon. In many such instances more persistent investigation would have demonstrated that therapeutic measures following a correct diagnosis would have obviated the necessity for an operation. A study, complete as possible, of all cases, employing every means at hand as an aid in diagnosis, is due the patient from a practitioner. He cites the thoroughness of the examinations of the Mayo clinic before operation is decided upon. Cases are given showing how easily symptoms may be misinterpreted, and how such cases were cured therapeutically, when they might have sent to the surgeon had not careful study

of symptoms detected the true causes. He asks that may it not be said that there will always be a border-line of cases in which both medical and surgical diagnosis may be questioned.—*Medical Record*.

---

#### DEATH OF A SWORD SWALLOWER.

---

According to Weinert, a reservist who could swallow his side-arm was shot through the chest, the wound healing completely. When he first resumed his sword swallowing, the point of the weapon encountered marked resistance, followed by fatal hemoptysis. The aorta had been perforated as a result of secondary displacement of the cesophagus.—*Münchener medizinische Wochenschrift*.

---

#### TOXICITY OF SALVARSAN.

---

From the reports of Ormsby and Mitchell, Moody and Ellis, it would appear that at least some of the salvarsan recently on the market has been unusually toxic. One wonders how many others have had similar experiences. Since the war began the supply of salvarsan and neosalvarsan has been short, at times seriously so. Meanwhile, other preparations, such as diarsenol, made in Canada, and arsenobenzol, made in Philadelphia under the direction of Professor Schamberg, have been more or less used. Professor Schamberg, as will be noted from his statement elsewhere, ceased to furnish his preparation as soon as the patentees were again able to supply the foreign product. This is to be regretted since it seemed to be giving perfect satisfaction, and especially since it could be furnished to hospitals and to charitable institutions at a price much less than the foreign product. Diarsenol, however, is still being used, probably to a considerable extent, although not openly imported.—*The Jour. of the Am. Med. Asso.*

## MEDICAL

---

### BACILLEMIA IN TB. SHOWN BY POST-MORTEM CLOTS FROM HEART.

---

Wilson examined blood clots from the heart in a case of generalized miliary Tb. in which the dissemination was extreme and the tubercles relatively young. The patient, a woman of 52 years of age, became ill about October 21, 1914, with a feeling of unusual fatigue, fever and slight chilly sensations, increasing toxemia, rapidly progressing anemia, weakness and dyspnea, without any signs of localized disease. Death took place on November 29. (Many tb. lesions were found at the necropsy.) The white clots and blood found in the right side of the heart were fixed in mercuric chlorid, carefully washed, and embedded in paraffin. The sections were floated on warm carbolfuchsin without removal of the paraffin, decolorized, and counterstained with methylene blue, washed, dried on the slide, the paraffin removed by warming and the use of xylene, and the sections mounted in balsam. These stained sections were then carefully searched for tubercle bacilli. Only four typical slender and beaded acidfast bacilli were found in the blood-clot sections. Sections of the tubercle lesions in the organs stained in the same manner showed the presence of similar acid-fast bacilli in enormous numbers in the focal necroses. If the other nine-tenths of the heart blood and clot not examined contained tubercle bacilli in the same proportion as the one-tenth examined, then the entire number contained in the heart blood at time of death would be forty or less. In this case, as the disease was in a most acute and severe form and the organisms were being generalized throughout the body in large numbers, the number of bacilli found in the blood at any given moment would have to be relatively small, and the chances for demonstrating their presence by stained smears, cultures, or animal inoculation could not be very favorable. In milder cases, and in cases of chronic pulmonary Tb. the chances for such a diagnostic demonstration of the bacilli in the circulating blood would seem to be very small indeed.—*Bacillema in Tuberculosis as shown by*

*examination of post-mortem clots from heart, U. F. Wilson, Jour. of Infect. Dis., Aug., xix, No. 2, 1916.*

---

#### EPIDEMICS OF PEMPHIGUS NEONATORUM IN CHICAGO.

---

Frederick H. Falls states that there occurred eight small epidemics of this condition in Chicago last year. The disease is an epidemic staphylococcic vesicular dermatitis usually occurring in new-born babies from the fourth to the fourteenth day, but capable of being transmitted to older children and adults. The disease is highly contagious and can be transmitted through a third party, not infected, but in contact with patients having the disease. No cases have been reported in babies who have not been exposed directly or indirectly to the cases developed in the hospital epidemics. Prompt isolation with quarantine of the obstetric wards until the last patient has left the hospital, followed by fumigation and painting, etc., is necessary. Special nurses are necessary on these cases. An efficient method of treating the lesions is to rupture the vesicle as soon as it forms and to apply 2 per cent ointment of ammoniated mercury to the lesion. Prophylactic and curative vaccines in doses of 15 millions are being tried, but their use is too limited to permit of any definite conclusions as to their value in preventing or affecting a cure of the disease. *Med. Record.*

---

#### MEDICAL TREATMENT OF GASTRIC AND DUODENAL ULCERS.

---

Harris has simplified, modified and Americanized the Lenhartz diet so that it can be carried out with greater accuracy by the average nurse or attendant than that which was originally advised. The nurse prepares enough of a mixture in the proportion of one egg and 1½ ounces of cream to 4 ounces of milk and gives it every hour from 7 a. m. to 7 p. m., in gradually increasing quantities, beginning with ½ ounce the first day and increasing ½ ounce each day. It requires six days to get up to 3 ounces at each feeding, and the quantity is kept at 3 ounces for four days. From the seventh to the tenth day a soft cooked egg and two tablespoonfuls of strained oatmeal may be given with the feeding at 7 a. m.



and 7 p. m., and at 1 p. m. two tablespoonfuls of scraped beef lightly broiled and two tablespoonfuls of thoroughly cooked rice with butter. After ten days until the fifteen day, 3 ounces of the milk and cream mixture are given at 9 and 11 a. m. and 3 and 5 p. m.; and 2 ounces of strained oatmeal with cream and sugar, and one or two thin slices of dry toast and two soft eggs for breakfast at 7 a. m. and supper at 7 p. m.; and chopped or minced chicken or scraped beef, dry toast, rice and ice cream or gelatin at 1 p. m. Butter is allowed after ten days. Beginning with the fifteenth day and for two months, the patient should have small meals three times a day, with an egg and goblet of milk between meals and at bedtime. Harris says that this diet may be begun in forty-eight hours after a hemorrhage and in three or four days after a gastro-enterostomy. In the meantime the patient may receive some nourishment by the rectum. After the sixth week and for a year after treatment the ulcer patient should follow the diet indicated in hyperchlorhydria.—*The Journal of the Amer. Med. Asso.*

---

#### ROENTGEN-RAY TREATMENT OF EXOPHTHALMIC GOITRE.

---

In the (Medical Record) Simpson reaches conclusions as follows as to the use of the X-rays in Grave's disease:

1. Many cases of exophthalmic goitre are associated with enlarged thymus glands, and this association often causes serious postoperative symptoms and even death.
2. While such an association will seriously complicate and prolong a surgical operation, it offers no such added difficulties for the Roentgen therapist.
3. Not only such ductless glands as the ovaries and testicles, but also the enlarged thyroid and thymus glands as well are very sensitive and may be atrophied by the Roentgen ray.
4. This theory has been amply proved by laboratory experiments and clinical results in many cases of hyperactivity of the thyroid gland—exophthalmic goitre.
5. If these cases of status lymphaticus and exophthalmic goitre will give the Roentgen ray a fair and impartial trial the

majority of them will be relieved of all troublesome symptoms and make unnecessary a disfiguring, dangerous and often futile operation.

6. The above findings are not entirely the writer's own hastily formed ideas, but include the results of several hundred cases of exophthalmic goitres that have been successfully treated by the Roentgen ray, the literature of which is open to all who may care to investigate it.—*Medical Progress*.

---

#### MEASLES, PERTUSSIS AND PNEUMONIA.

---

Drs. P. J. Eaton and E. B. Woods, of Pittsburg, reported a group of cases which appeared simultaneously in one family chiefly because it showed the peculiar mix-up of infectious disease that might be possible. Two children in a family were about half way through whooping cough when a third came down with measles, then whooping cough, followed by a chest deformity which gradually disappeared. One of the two children having whooping cough contracted measles, which was followed by pneumonia, while the other did not; the latter child was watched very closely. The measles were treated by cool, fresh air and vaccines. Dr. Eaton stated that it was his custom to administer vaccines to children who were exposed to measles.—*Pediatrics*.

---

#### THE USE OF SALT SOLUTION BY THE BOWEL IN INFANTS AND CHILDREN.

---

Dr. Edwin E. Graham, of Philadelphia, presented this paper in which he said that his experience with the Murphy method of injecting saline solution by slow proctoclysis in certain conditions in children had led him to believe that it was of much more value to the pediatricist than most of them were aware of. In the acute infectious diseases toxemia might be greatly influenced by the employment of the Murphy drip. It was also of value in uremia and suppression of urine and general speaking for toxemia from any cause, whether it was autointoxication, mineral poisoning, or

septicemia. If nephritis with edema was present the administration of salt solution by this method was unwise, although in a few such cases it had apparently been employed with success. Dr. Graham said he had been greatly impressed by the results of the Murphy drip in profuse diarrhea due to intestinal infection. In employing this method there were several points to be observed: The catheter must be introduced 4 or 5 inches into the bowel; there must be a good return flow, and the water must be kept at a temperature of about 110 degrees F. The water should have a drop of about 12 inches. It was a good plan to allow it to flow for an hour and then allow the patient a rest of one hour. If slight edema made its appearance the treatment was to be discontinued. The solution should be carefully prepared; to say a teaspoonful of sodium chloride to a pint of water was exceedingly inaccurate.—*Pediatrics*.

---

#### BACTERIAL CONTAMINATION OF MILK.

---

Ruedezir, in the *Journal of Infectious Diseases*, points out that the milk may be contaminated badly by a milking machine if the teat cups and rubber tubes are not carefully cleansed and scalded before each milking. He found that in warm weather, particularly, the milk obtained by a milking machine may give a much higher count than that drawn by hand. In one dairy the milk drawn by hand contained 860 colonies, by the milking machine as generally used over 2,000,000. When the same machine was used after thorough scalding of it and the can, the count was twenty-four hundred.—*The Medical Brief*.

---

### OBSTETRICAL

---

#### BACKWARD DISPLACEMENT OF THE UTERUS AFTER THE MENOPAUSE.

---

Dr. Frederick J. McCann (*British Medical Journal*, July 1, 1916) says that as regards the above condition, if the uterus be small and atrophic, no treatment is necessary, for it will be found

that under these circumstances the displacement does not cause any trouble. If the uterus be still large and the other indications point to the necessity for an abdominal operation, a thorough fixation of the uterus can be done, since here the question of future pregnancy does not arise. Otherwise the same rules should guide the treatment as are applicable to women in the childbearing period.—*Surgical Gleanings*.

---

ACUTE RENAL INFECTION IN PREGNANCY AND  
THE PUERPERIUM.

---

Ninety cases of renal infection occurring in pregnancy have been observed by Harris. Many of these were mild cases, and seen only on one occasion, the diagnosis being based on ordinary clinical methods. These cases were treated by advice and medicine, and were, as a rule, promptly lost sight of. Several were renal infections, dependent on causes other than the existing pregnancy, and were not true cases of pyelitis gravidarum. Thirty-two of the total number were more or less serious cases of pyelitis gravidarum. They were all subjected to careful cystoscopic examination, and treated by the retained ureteral catheter. The right kidney was involved in every case; in six both kidneys were affected. In no case was the left side alone affected. In the six bilateral cases the left kidney was infected after the right and to a less degree, as though it were a secondary and ascending infection. In every case of the thirty-two of the series a pure growth of *Bacillus coli, communis* was obtained from the catheterized urine from the renal pelvis, though in seven of the cases the bladder urine showed a mixed infection, with staphylococci in six and streptococci in one case.

These findings, Harris believes, warrant the two deductions that pyuria and pain confined to the left side are probably due to causes other than pyelitis gravidarum, and that pyuria in pregnancy associated with other organisms in the renal pelvis than *B. coli-communis* probably owes its origin to some cause other than pyelitis gravidarum. In 18 of the 32 cases, ureteral obstruction was situated from 6 to 8 inches above the ureterovesical ori-



fice, that is, either at or just above the level of the pelvic brim. In three of these 18 cases in which pyelo-ureterograms were made, the obstruction in all was seen to be about 1 to 2 inches above the brim. In two other cases some obstruction was encountered at the ureterovesical orifice. In the remaining 12 cases no obstruction was detected by the ureteral catheter, though in one case in which pyelography was performed, the ureter was seen to be dilated to within about 2 inches of the pelvic brim. Harris suggests that a tense psoas parvus tendon is a contributing cause of the ureteral obstruction, at any rate, in some of these cases.—*The Jour. of the Am. Med. Asso.*

---

#### PITUITARY EXTRACT IN POST-ABORTION CURETTAGE.

---

This use of pituitary extract, as suggested by H. D. Furniss (*Surgery, Gynecology, and Obstetrics*, September, 1916), seems such a logical procedure that one wonders at not having seen the suggestion made in print long before this. Furniss administers one cubic centimeter of pituitary extract hypodermically before curetting for incomplete abortion, and has found that the most favorable time to give the pituitrin is 15 minutes before the actual curettage is begun. When the interval between injection and operation has been less, the resulting contraction has not been so pronounced. Among the advantages which accrue from the preliminary injection of pituitary extract are that it produces firm contraction of the uterus, so that the curetting is almost bloodless, and much more easily done; and that because of the contraction the uterine cavity is small and the contracted walls present a resistance to the curette which makes their cleansing less difficult, and also lessens the risk of uterine perforation. Furniss states that as yet he has not had any excessive postoperative bleeding following the use of pituitrin; but, realizing that such a possibility exists, he advises packing uterus and vagina with iodoform gauze, which is to be removed at the end of 24 hours. While Furniss' article refers to the use of pituitrin only before curetting for incomplete abortion, there seems to be no good reason why it could not be used to advantage under certain other conditions:

for example, when curetting forms part of the operative treatment in those types of cases in which the uterus is relatively large and flabby, or when curetting is done in the case of an individual whose menstrual flow is habitually excessive. It would seem, therefore, that Furniss has called attention to a therapeutic resource that will ultimately be found valuable in a far more extended field in gynecological surgery than that covered by the original suggestion—*Medical Record*.

---

#### LEFT FALLOPIAN TUBE FOUND IN LEFT FEMORAL HERNIA.

---

E. G. Renny presents a report of a case of this condition, and states that he has found no record of a similar case. The patient, aged forty-two, married, mother of three children, noticed a lump in the left groin for eighteen months. During the last five weeks it had become painful, and, thinking it was a rupture, she bought a truss and wore it. The truss made the lump very inflamed and painful. She then consulted Dr. Renny, who found a painful swelling in the groin which, on account of the inflammation present, made the diagnosis uncertain. It was dull to percussion, irreducible, with no impulse on coughing and no strangulation symptoms. The finger could be passed up the inguinal canal for a short distance. Later, after rest and a subsiding of the inflammation, an incision was made over tumor. It proved to be a femoral hernia with somewhat thickened sac, containing a considerable quantity of green fluid, under tension. Occupying the crural canal was a red, soft substance which, when traction was made on it, proved to be the left Fallopian tube, with its fimbriated extremity presenting. This was returned to the abdomen without much difficulty.—*Medical Record*.

---

#### UTERINE FIBROIDS.

---

Dr. Mary Arnold Snow, of New York, after discussing the frequency, cause, classification, diagnosis, structure, growth, site and symptoms of uterine fibroids, advocated their treatment by the X-ray, preferably by the fractional dose method. The advan-

tages of the X-ray treatment were: If left the reproductive system intact, though sterile, whereas the radical operation meant incalculable reflex shock to the system mentally and physically. The X-ray treatment was an ambulatory treatment. There was no danger from hemorrhage. The patient enjoyed her usual comfort. With proper precautions there should be no disturbance of the digestive system, as from the after effects of an anesthetic, and there should be freedom from danger to life. The lowest mortality from surgery was 3 to 5 per cent. There was no period of convalescence, and insanity never occurred. The symptoms of the induced menopause were less pronounced than those following an operation. The contraindications were: Such severe symptoms that the life of the patient would be endangered by waiting for results from the X-ray; pedunculated submucous fibroids; infectious gangrene or malignancy, or where the fibroid was associated with disease of the adnexa.—*Medical Record*.

---

#### TUBAL STERILIZATION.

---

Heineberg in the *New York Medical Journal* of July 15, 1916, contributes a useful paper on this subject. From his resume of the clinical and experimental experience with tubal sterilization, he believes that we may fairly arrive at the following conclusions:

1. There is no method of tubal sterilization which affords absolute security against conception.

2. Simple ligation of Fallopian tubes with either single or double ligatures has been followed by the largest number of reported failures.

3. Excision of a wedge-shaped section from each cornu of the uterus, followed by careful closure of the opening with musculo-muscular and seroserous sutures, has yielded better results than any other method.

4. In the light of our present knowledge it seems unwise to advocate any other method than cornual resection. These conclusions are in accord with those arrived at in previous reviews of this subject by Charles, Geissler, Gunther, Mironow, Offergeld, Perdritz, Pestalozza, and Sarwey.—*The Therapeutic Gazette*.

## Editorial

---

**PUBLISHER'S NOTICE**—The Journal is published in monthly numbers of 48 pages at \$1.00 a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money order, draft, or registered letter, should be addressed to the Business manager, C. S. Briggs, M. D. corner Sumner and Union Streets, Nashville, Tenn.

All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

---

### THE CANCER PROBLEM.

---

We are pleased to give space to the appended card sent to us by the Executive Committee of the American Society for the Control of Cancer. We feel assured that it will lend additional interest to the translated article from the *Journal de Medecine et de Chirurgie Pratique* that appears as the leading article in this number of the Journal. The movement is eminently praiseworthy and should be encouraged by every one interested in the welfare of man. The ever-increasing mortality from cancerous affections all over the civilized world is appalling in the extreme. The mystery that surrounds the dread disease and the persistent efforts that are being made by scientists everywhere to discover the cause and the cure, makes the subject a fascinating one to all. This movement is second in importance only to that made for the checking of the ravages of the Great White Plague which movement of recent years has been pushed with the greatest enthusiasm, and we may truthfully say with decided evidence of success in the reduction of the frightful mortality that has hitherto obtained in tuberculosis.

Cancer, in certain cases, is curable beyond a doubt. Of all the myriad remedies proposed for the relief of the disease, it will be universally admitted that the surgeon's knife is the remedy *par excellence*. It is worthy of note that when the part affected by cancer is isolated as it were from contiguous tissues as in epithelioma of the lip, the uterus and its adnexa, the gall bladder, the



penis, the testicles, the extremities, etc., early operations promise complete and lasting relief. When the disease involves the female breast or internal organs in which the progress is insidious and extension rapid by reason of anatomical connections, operations for cure do not offer as much, simply from the tardiness of operative interference. We do not question but that even in these instances, if the measures for ablation were undertaken at the proper time, relief might be obtained; but delay on the part of the sufferer, and we regret to say, even on the part of the medical adviser, is too often the case. Instances are not uncommon in which operation was postponed until more positive evidence of the disease presented when the patient would be far beyond the hope of relief.

Therefore not only is there a call for the systematic education of the laity in malignant diseases, but a call equally as urgent for the education of physicians.

Were it possible, as this movement advocates, to subject everyone, young and old, to a physical examination by a competent physician at least once a year, the mortality from cancer would be greatly reduced. Early operation would then be more frequently undertaken and recurrence after operation would be exceptional. As we said above, then, this movement should be encouraged by every means possible and regular visits to physicians for close examination should be as much the custom as visits to the dentist for the preservation of the teeth.

#### EARLY DISCOVERY OF CANCER.

##### Yearly Examination Urged for Prevention of Disease.

The American Society for the Control of Cancer is strongly seconding the efforts of the National Association for the Study and Prevention of Tuberculosis to have December 6th set apart as "National Medical Examination Day." Among other observances planned for the day, Dr. Harvey R. Gaylord, of Buffalo, Director of the New York State Institute for the Study of Malignant Disease will deliver an address on cancer, at Minneapolis under the auspices of the "Health and Happiness Week" arranged

by the Minnesota Public Health Association in coöperation with other social and civic organizations.

The time is undoubtedly coming when Americans will appreciate the great wisdom of the Chinese policy of paying the doctor to keep the patient well. The rapidly growing movement in favor of an annual medical examination for every person, sick or well, promises much benefit in the reduction of the death rate from cancer as well as that from tuberculosis. In both these very prevalent diseases the hope of cure is very much greater if the ailment be recognized and treated in the earliest stages. Cancer is by no means a hopelessly fatal disease and an ever-increasing number of those afflicted are being saved through their intelligent recognition of the danger signals and their prompt recourse to competent treatment. Undoubtedly many more cases of this disease would be recognized in time for treatment in the early stages, when cure is a comparatively simple matter, if people were in the habit of consulting their physicians once a year or even at shorter intervals, and having a general physical examination.

Cancer patients are often persons who have generally enjoyed good health, have never been seriously ill and who at the time of the onset of the disease were apparently in robust health. This disease is so insidious in its approach and so often without pain in the first stages that the patient often fails to pay serious attention to the signs of danger. Statistics independently gathered by many surgeons prove that the average cancer patient waits a year or more after observing some suspicious condition before seeking the treatment which is then often too late. This disastrous delay is the main if not the sole obstacle to the successful treatment of cancer at the present time.

"Early cancer," says Dr. Charles P. Childs, a prominent English surgeon who has written one of the best popular books on the control of this disease, "produces no feeling of ill health whatever. In other words, early cancer has no symptoms. The reasons which usually induce people to consult a doctor are the suffering of pain or the feeling of ill health. Early cancer produces neither. People are far more likely to go to a dentist with an aching tooth than to a doctor with commencing cancer; they are

far more likely to consult a doctor with some trifling derangement of the liver than on account of cancer in its early stages. Owing to the insidiousness of its onset, the victims of cancer are often totally unconscious of the seriousness of the disease which has attacked them. Disaster following on delay through sheer ignorance on the part of the unfortunate sufferers that there was anything seriously the matter with them—these are the everyday experiences of surgeons who see much cancer.” All good physicians, however, are familiar with the warning signs of the approach of this dangerous disease and if given a chance to examine their patients once a year, especially after the age of thirty, they could undoubtedly save many of them from death before their time.

---

#### DO YOU KNOW THAT

---

Rural sanitation is a health protection to the city dweller?

It's foolish to educate a boy and then let him die of typhoid fever?

Exercise in the garden is better than exercise in the gymnasium?

Clean water, clean food, clean houses make clean, healthy American citizens?

The State of California has reduced its typhoid death rate 70 per cent in the past ten years?

Rats are the most expensive animals which man maintains?

It is estimated that the average manure pile will breed 900,000 flies per ton?

---

#### SAPONIN BARRED FROM FOOD PRODUCTS.

---

Washington, D. C., December 1, 1916—The addition of saponin to food mixtures which are sold for use in place of white of eggs is regarded by the Bureau of Chemistry of the Department of Agriculture as constituting adulteration within the meaning of the Food and Drugs Act. In “Service and Regulatory Announce-

ments No. 17" it is stated that the practice is usually adopted for the purpose of concealing inferiority and that therefore it comes within the definition of adulteration in the Food and Drugs Act.. Saponin is used extensively in so-called substitutes for white of egg for the purpose of producing foam and thus giving the articles a fictitious appearance of body and therefore of food value.

Saponin is a substance that when dissolved in water foams like soap. It is extracted from plants known as soapbark and soap-root, and a few other plants, by boiling them in water. Its name is derived from the Latin word *sapo*, which means soap. When saponin is added to the so-called substitutes for white of eggs it produces a foam similar in appearance to the foam produced by genuine white of egg.

---

#### IMPORTANT NOTICE.

---

Owing to increased cost of paper and printing material, and consequently the advanced cost of publication, we are compelled to reduce the size of the Journal to 32 pages instead of 48 as before, beginning with the January number. We assure our readers that we shall try to make up in quality what the Journal lacks in quantity and trust they will appreciate our reason for making this reduction.

---

*To the Editor Nashville Journal of Medicine and Surgery, Nashville, Tennessee.:*

DEAR SIR—The National Board of Medical Examiners held its first examination from October 16 to 21, in Washington, D. C.

There were thirty-two applicants from seventeen states, representing twenty-four medical schools, and of these sixteen were accepted as having the necessary preliminary and medical qualifications, ten of whom took the examination.

The following men passed:

Dr. Harry Sidney Newcomer, Johns Hopkins University.

Dr. William White Southard, Johns Hopkins University.

Dr. Orlow Chapin Snyder, University of Michigan.



Dr. Thomas Arthur Johnson, Rush Medical School.

Dr. Hjorleifur T. Kritstjanson, Rush Medical School.

As this will be of some general interest, we would appreciate a notice of this examination in your journal.

Very truly yours,

J. S. RODMAN,

*Secretary.*

P. S.—The second examination will be held in Washington, D. C., June, 1917. Further information may be had by applying to Dr. J. S. Rodman, Secretary, 2106 Walnut St., Philadelphia, Pa.

---

## Obituary

---

DR. JOHN S. CAIN.

---

Dr. John S. Cain, one of the most distinguished physicians of the South, died at his home in Sewanee, Tenn., December 3, 1916, at the age of 86 years. Dr. Cain was born in Sumner County, Tennessee, August 3, 1830. He, in his early life, moved to Nashville, where he secured his education. He first studied civil engineering, but later studied medicine in the offices of Drs. W. K. Bowling and Wm. A. Cheatham. In 1884 he accepted the chair of gynecology in the Nashville Medical College, and after a time was transferred to the chair of Medicine in the Medical Department of the University of Nashville. In 1886 he organized the Medical Department of the University of the South, where he taught for a number of years. He served during the war as surgeon in the Confederate service. He received many honors from the profession and at one time was president of the Tri-State Medical Society, composed of Arkansas, Mississippi and Tennessee. Dr. Cain was a brilliant physician, a thorough, painstaking teacher and an attentive practitioner of medicine. He was greatly admired and beloved by his colleagues in the profession and his humorous, sometimes quaint, but always instructive, lectures will

be long remembered by those who sat under his teaching. His star will shine for a long time in the firmament of departed physicians—a memory we delight to honor.

---

DR. GORDON WHITE.

---

This eminent dentist died in this city December 6th after an illness extending over several months, though he was at work up to a very short time before the acute attack to which he succumbed. Dr. White was one of the best known men in the dental profession in the South, and he had acquired a reputation for skill, especially in his treatment of Riggs disease, that extended all over this country and even to Europe. He had many honors bestowed upon him, among them the presidency of the Southern Dental Association. He graduated in dentistry from the Baltimore College of Dental Surgery in March, 1879. He at once began the practice of his profession in Nashville and in a short time acquired a reputation equalled by few and surpassed by none. His friends were legion and with them he was always a favorite. His open-hearted genial manner attracted to him a coterie of friends that very few men are fortunate enough to have. He was an indefatigable worker and a close student. He was never attached to a teaching institution, though he delivered lectures frequently to classes in various colleges. His death is a great loss to the dental profession of this section and his demise will be a source of sincere grief among a multitude of friends.

## Publisher's Department

---

The usefulness of good Hypophosphites in Pulmonary and Strumous affections is generally agreed upon by the Profession.

We commend to the notice of our readers the advertisement in this issue. "*Robinson's Hypophosphites*" is an elegant and uniformly active preparation; the presence of quinine, strychnine, iron, etc., adding highly to the tonic value.

---

"I prescribe large quantities of Tongaline for many conditions for which it is particularly indicated, but I obtain especially gratifying results from its use for what are commonly called "colds," the symptoms of which are chills, fever, sneezing, coughing, etc., and for which the system requires, first of all, prompt and thorough elimination.

"I order four ounces Tongaline, directing that two teaspoonfuls be taken in a half glass of water, preferably hot, every two hours for three or four doses or until the patient is thoroughly under the influence of the medicine; then one teaspoonful every three hours until the attack has been aborted or the patient has recovered.

I have personally derived great benefit from Tongaline for "colds", taking it on the first appearance of any of the symptoms and in nearly every instance abort the disease and I use several bottles of Tongaline myself during the winter months in that way."

---

### AN ESTABLISHED FACT.

---

If there is one therapeutic fact that has been established beyond all question, it is that intestinal indigestion traceable to hepatic torpor and insufficient biliary secretions, will quickly respond to the action of Chionia.

This reliable preparation of *Chionanthus Virginica* is especially effective in these cases since it promptly stimulates the liver and

produces a notable increase in the biliary output without setting up pronounced catharsis. Thus it not only controls intestinal fermentation( but augments the secretory activity of the intestinal glands. As a consequence, the severe pain that so often characterizes intestinal indigestion—coming on two or more hours after the ingestion of food—is quickly controlled; the sallow, muddy complexion due to the absorption of intestinal poisons rapidly clears up, and the patient's whole condition shows substantial improvement.

All this serves to emphasize that few remedies are so efficient and reliable as Chionia in the ills that we very properly have learned to lay at the door of a sluggish, indolent liver.

---

#### OBSTIPATION FOLLOWING OPERATION.

---

There are many theoretical reasons why INTEROL should be of value to the post-operatively constipated patient. But the best reason is that it IS of value.

And the most gratifying thing about it is that in most cases, while at first, the patient may need as much as 5I to 5ISS of INTEROL per day, with time, he can *diminish the dosage* to as little as half an ounce a day, or an ounce every other day, and even discontinue INTEROL for periods of time.

In many cases, INTEROL is the last resort to avoid another use of the surgeon's knife.

---

#### WHEN THE HEART NEEDS HELP.

---

In everyday practice there is a constant demand for a safe and reliable cardiac tonic, a remedy that will correct irregularity of the heart's action, and at the same time give the aid and support needed to enable it to do its work satisfactorily.

Among the remedies that have been used to overcome the functional disorders of the heart, which, if not serious, nevertheless cause much anxiety to the afflicted patient, there is none that has proven so generally useful as Cactina Pillets.



Non-cumulative in its effects; Cactina can be administered with every confidence in its power to support the tired, over-worked heart, regulate its action and as one physician has expressed it, "help it over the hard places."

It is this dependable tonic action of Cactina that has led so many physicians to prefer it to other remedies in the treatment of tachycardia, tobacco heart, palpitation, arrhythmia and functional diseases of the heart generally. Its efficiency is shown in no uncertain way by the aid afforded "when the heart needs help."













P  
Med  
N  
v.110

Nashville journal of medicine  
and surgery

**GERSTS**



